FlexWATCH®

Web Admin User Manual

For Camera models with the firmware version 4.40 or above

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www.flexwatch.com

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Precaution on microSD card

- ✓ Do not use force, a thin stick or tweezers to remove the microSD card. If you cannot remove the microSD card, contact customer support.
- ✓ To prevent any data damage, follows the below caution. We do not provide any guarantee for damaged data
  - Do not remove a memory card or Do not turn off the IP Camera while reading or writing data,
  - Do not operate the IP Camera in the location where static charge or electrical noise is present.
- ✓ Do not remove the microSD card while IP Camera is recording. Disable the Recording configuration first and then turn off the IP Camera before removing microSD card. Do not insert a deformed microSD card into the Reader.
- ✓ Do not try to access microSD card extracted from IP Camera on Windows PC or other devices. If Linux file system like ext3, ext4 is not installed, It may destroy all data of microSD card.
- ✓ Regular maintenance by formatting microSD card in every 6 months is highly recommended as microSD card could be damaged by physical, or electrical characteristics. or its file system may be fragmented, resulted in degradation in performance by repeated access.
- ✓ Formatting microSD card will delete all files stored on it. You may use FlexWATCH SmartPlayer to back up the recorded video stream as AVI file before formatting

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2. Introduction

This manual covers the FlexWATCH® camera models with firmware version 4.30-B3 or above.

Note: All instructions and information in this manual are valid for FlexWATCH® devices mentioned above unless otherwise stated.

3. Web Admin Page

Most of the features in the FlexWATCH® device can be set up by an authorized user or an administrator via the Web Admin Page.

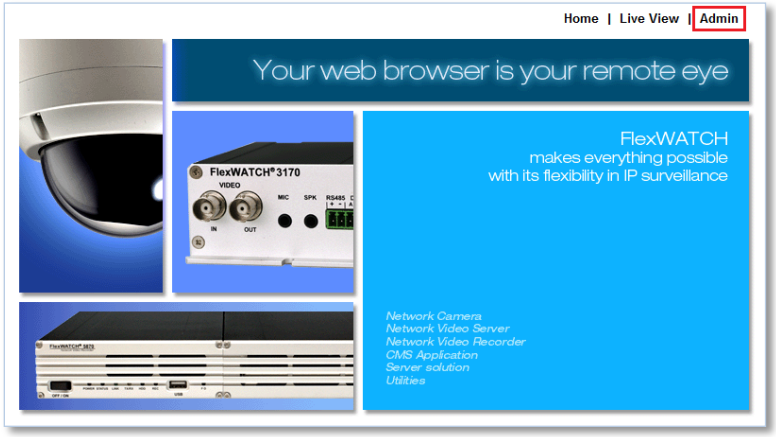
3.1 Entering the Web Admin Page

To login to the Web Admin Page, follow the steps below:

1) Enter the **IP Address** or **Domain Name** of the FlexWATCH® device at the address bar on your web browser.

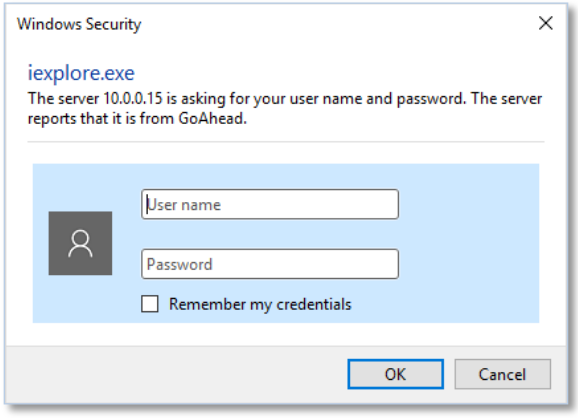
> *Note: We recommend Internet Explorer as a web browser for using FlexWATCH devices. The initial IP setting for the FlexWATCH® device can be done through **IP Installer** software which can be found in the enclosed CD or software download page at FlexWATCH® Web Site (http://www.FlexWATCH®.com/support/download/software.asp).*

2) When connected to the FlexWATCH® device via the web browser successfully, the device home page will be displayed as shown below.



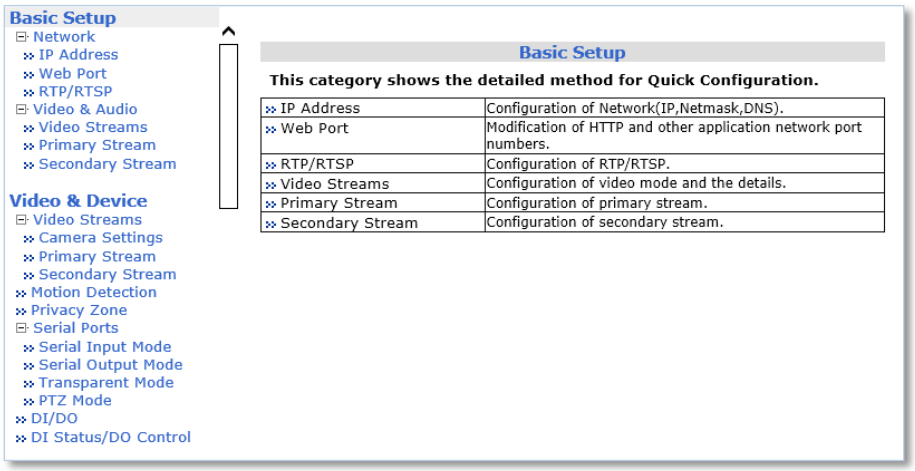
3) Click **Admin** at the upper right corner of the device home page.

4) Enter **User name** and **Password** when an authentication window is appeared as shown below, and then click **OK.**



> *Note: The default user name and password is "root".*

5) The Web Admin Page will appear as shown below when the login is successfully finished.



3.2 Web Admin Menu Navigation

The following table shows the hierarchy of the Web Admin Page menu structure:

Category	Main Menu	Level 1 Sub-Menu	Level 2 Sub-Menu
Basic Setup	Network	IP Address Web Port RTP/RTSP	N/A
	Video & Audio	Video Stream Primary Stream Secondary Stream	N/A
Video & Device	Video Stream	Camera Settings Primary Stream Secondary Stream Tertiary Stream	N/A
	Motion Detection	N/A	N/A
	ROI	N/A	N/A
	Privacy Zone	N/A	N/A
	PTZ	PTZ OSD Menu PTZ Preset	N/A
	Serial Ports	Serial Input Mode Serial Output Mode Transparent Mode PTZ Mode	
	DI/DO	N/A	N/A
	DI Status/DO Control	N/A	N/A
Recording	Disk Setting	Disk Status & Format Disk Information Disk Circulation Disk Status Report	N/A
	Recording Setting	Built-in Module 0	Camera 1 Camera 2 Camera 3

			Camera 4
	Recording Profile	N/A	N/A
	Clear Setting	N/A	N/A
	Delete Recorded Data	N/A	N/A
Network	IP Address	N/A	N/A
	Web Port	N/A	N/A
	RTP/RTSP	N/A	N/A
	Bandwidth	N/A	N/A
	Network Status	N/A	N/A
	Network Status Notify	N/A	N/A
	DDNS	N/A	N/A
	UPnP	N/A	N/A
	SNMP	N/A	N/A
	HTTPS	N/A	N/A
	Zeroconf	N/A	N/A
	IP Filtering	N/A	N/A
System	Name	N/A	N/A
	Hostname	N/A	N/A
	Date & Time	N/A	N/A
	Admin. Password	N/A	N/A
	Access Level	N/A	N/A
	User	N/A	N/A
Advanced	Advanced Services	Email FTP (Buffered) FTP (Periodic) Sensor Notification Alarm Output	Camera 1 Camera 2 Camera 3 Camera 4
Utilities	Log	N/A	N/A
	Reboot	N/A	N/A
	Restore Default	N/A	N/A
	Update	N/A	N/A

4. Basic Setup

Basic Setup provides shortcuts to the settings that should be made before using the FlexWATCH® device.

4.1 Network

4.1.1 IP Address

Please see page 39.

4.1.2 Web Port

Please see page 41.

4.1.3 RTP/RTSP

Please see page 41.

4.2 Video & Audio

4.2.1 Video Streams

Please see page 10.

4.2.2 Primary Stream

Please see page 17.

4.2.3 Secondary Stream

Please see page 17.

4.2.4 Tertiary Stream

Please see page 17.

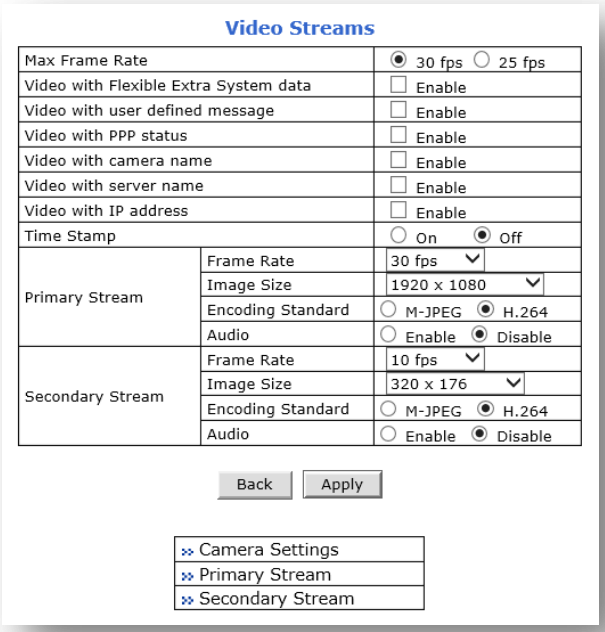
5. Video & Device

Video, Audio, Motion Detection, Streaming and External device related settings are available in this menu.

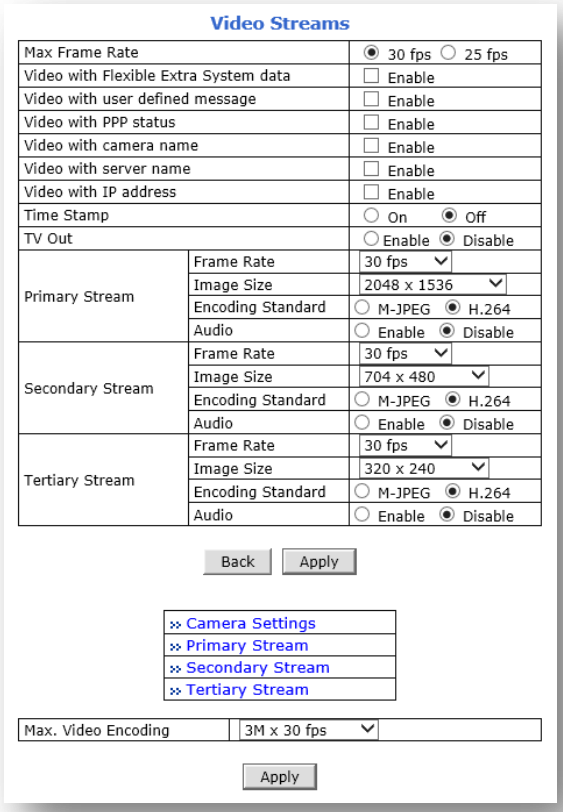
5.1 Video Streams

Note: Video stream settings page may vary depending on the model number or firmware version. Please check the device model number first before you read the information below.

For Dual Stream Camera Models



For Triple Stream Camera Models



- **Max Frame Rate:** Depending on the power frequency can operate the device with NTSC (30FPS) or PAL (25FPS).
- **Video with UART Flexible Extra System Data:** If Enabled, video data will contain UART sensor data from COM port.
- **Video with User defined message:** If Enabled, video data will contain the user-defined message data.
- **Video with PPP status:** If enabled, video data will contain PPP connection status.
- **Video with Camera name:** If enabled, video data will contain the camera name defined by user.
- **Video with IP address:** If enabled, video data will contain the IP address of the FlexWATCH® device.
- **Time Stamp:** If enabled, video data will contain the time stamp.
- **Frame Rate:** FPS (Frame Rate per Second) can be set to the video streams independently. Available FPS are follows: 30 / 15 / 10 / 7.5 / 5 / 3.75 / 3 /2 /1
- **Encoding Standard**: Select the compression type for each stream, either M-JPEG or H.264.

- **Image Size:** Select the image size for each video stream.
  To check the supported resolution, please refer to the resolution tables below
- **Audio:** Select if Audio function is to be used. Bi-directional (Two-way) Audio is supported.

Primary Stream

Camera Model	QXGA	Full HD	SXGA (HD)	D1	CIF	QCIF
VGA series	-	-	-	640 x 480	320 x 240	160 x 112
1.3 Megapixel Series	-	-	1280 x 1024	704 x 480	320 x 240	160 x 112
2.0 Megapixel Series	-	1920 x 1080	1280 x 720	704 x 480 640 x 352	320 x 176	160 x 96
3.0 Megapixel Series	2048 x 1536	-	1280 x 1024	640 x 480	320 x 240	160 x 112

Secondary Stream

Camera Model	D1	CIF	QCIF
VGA series	640 x 480	320 x 240	160 x 112
1.3 Megapixel Series	704 x 480	320 x 240	160 x 112
2.0 Megapixel Series	704 x 480 640 x 352	320 x 176	160 x 96
3.0 Megapixel Series	640 x 480	320 x 240	160 x 112

Tertiary Stream

Camera Model	CIF	QCIF
3.0 Megapixel Series	320x240	160x112

- **Max. Video Encoding:** Select maximum resolution and frame rate of primary stream for the FlexWATCH® device.
  Available options are follows: 2M x 30fps, 2M x 60fps, 3M x 30fps

Note: Depending on the camera model, ***Max. Video Encoding*** *option may not be supported.*

5.1.1 Camera Settings

This setting page provides image related settings for the FlexWATCH® device.

For following camera models: FW1173-FX, FW1174-FC, FW1175-FM, FW1175-FX, FW1176-FM, FW1176-FX, FW7501-FC3, FW7504-FTM, FW7504-FTV, FW7601-FTM, FW7601-FTV, FW7601-FC3, FW7901-FTM, FW7901-FTV, FW7901-FC3

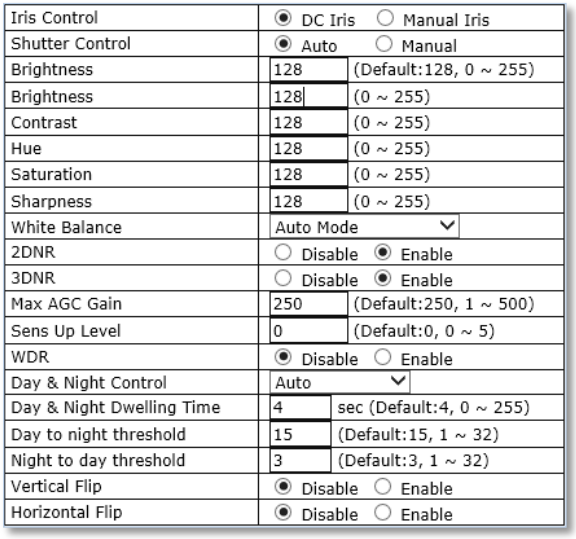
Lens Type	◉ DC Iris ○ Manual Iris
Noise Filter	◉ Off ○ On
Brightness	144 (Default:144, 0 ~ 256)
Contrast	16 (Default:16, 0 ~ 30)
Sharpness	3 (Default:3, 0 ~ 5)
AGC Gain	50 (Default:50, 1 ~ 126)
Sens Up Level	0 (Default:0, 0 ~ 5)
WDR	◉ Off ○ On
Day & Night Control	Auto
Day & Night Dwelling Time	4 sec (Default:4, 0 ~ 255)
Day & Night Detect	◉ Internal ○ External
The threshold of day to night	15 (Default:15, 1 ~ 32)
The threshold of night to day	3 (Default:3, 1 ~ 32)
Vertical Flip	◉ Disable ○ Enable
Horizontal Flip	◉ Disable ○ Enable
Manual Shutter Enable	◉ Disable ○ Enable
Video Output	◉ Disable ○ Enable
Video Output Channel	◉ Primary ○ Secondary

- **Lens Type:**
  - **DC Iris:** Select if a DC powered auto IRIS Lens is mounted.
  - **Manual Iris:** Select if Manual IRIS lens or no iris built-in lens is mounted.
- **Noise Filter:** Used to reduce static on image.
- **Brightness:** Select the brightness of image between 0 and 256.
- **Contrast:** Select the contrast of image between 0 and 30.
- **Sharpness:** Select the sharpness of image between 0 and 5.
- **AGC Gain (Auto Gain Control):** Based on Selected AGC sensitivity level, amplifies the video signal to make the screen brighter in low light conditions automatically. In the higher sensitivity level, video noise may be increased.
- **Sens Up Level:** Based on selected Sens Up Level, lowering the shutter speed of the camera in low light conditions automatically.
- **WDR (Wide Dynamic Rage):** Wide dynamic range can improve the exposure when there is a considerable contrast between light and dark areas in the image. Enable WDR in intense backlight conditions.
- **Day & Night Control:**
  - **Disable:** Color Mode.
  - **Black & White:** Black & White Mode.
  - **Auto:** Color mode for normal condition (daytime), Black & White for Low Light condition (Night Time).
- **Day & Night Dwelling Time:** Set the metering cycle of Light Sensor in seconds.
- **Day & Night Detect:**
  - **Internal:** Use built-in light sensor.
  - **External:** Use external light sensor.
- **The threshold of day to night:** This is the point of transition from Day to Night mode. Select between 1 and 32, and lower the value the earlier the transition point.
- **The threshold of night to day:** This is the point of transition from night to day mode. Select between 1 and 32, and lower the value the earlier the transition point.
- **Vertical Flip:** Rotate the image 180° vertically.
- **Horizontal Flip:** Rotate the image 180° horizontally.
- **Manual Shutter Enable:** If enabled, the shutter speed will be selected manually. If disabled, it is

controlled automatically.

- **Video Output: Enable** the analog Video output (NTSC/PAL).
- **Video Output Channel:** Select a video stream for video out.

For following camera models: FW7300-TXN, FW7500-TXM, FW7500-TXV, FW7502-TVP, FW7502-TVF, FW7504-TVM, FW7504-TVV, FW7901-TVM, FW7901-TVV, FW7902-TVF, FW7930-TXM, FW9302-TXM



Iris Control	◉ DC Iris ○ Manual Iris
Shutter Control	◉ Auto ○ Manual
Brightness	128 (Default:128, 0 ~ 255)
Brightness	128 (0 ~ 255)
Contrast	128 (0 ~ 255)
Hue	128 (0 ~ 255)
Saturation	128 (0 ~ 255)
Sharpness	128 (0 ~ 255)
White Balance	Auto Mode
2DNR	○ Disable ◉ Enable
3DNR	○ Disable ◉ Enable
Max AGC Gain	250 (Default:250, 1 ~ 500)
Sens Up Level	0 (Default:0, 0 ~ 5)
WDR	◉ Disable ○ Enable
Day & Night Control	Auto
Day & Night Dwelling Time	4 sec (Default:4, 0 ~ 255)
Day to night threshold	15 (Default:15, 1 ~ 32)
Night to day threshold	3 (Default:3, 1 ~ 32)
Vertical Flip	◉ Disable ○ Enable
Horizontal Flip	◉ Disable ○ Enable

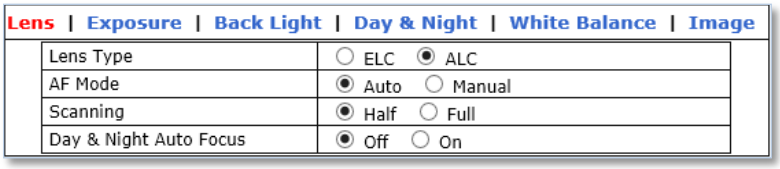
- **Iris Control:**
  - **DC Iris:** Select if a DC powered auto IRIS Lens is mounted.
  - **Manual Iris:** Select if Manual IRIS lens or no iris built-in lens is mounted.
- **Shutter Control:** If Manual is selected, the shutter speed will be selected manually. If not, the shutter speed will be controlled by the FlexWATCH® device automatically.
- **Brightness:** Select the brightness of image between 0 and 255.
- **Contrast:** Select the contrast of image between 0 and 255.
- **Hue:** Select the hue of image between 0 and 255.
- **Saturation:** Select the saturation of image between 0 and 255
- **Sharpness:** Select the sharpness of image between 0 and 255.
- **White Balance:**
  - **AutoMode**: Adjust white and gray-scale parameters in video, based on the color temperatures of the viewed scene automatically.
  - **Manual Temp. Mode**: Adjust white balance based on the selected color temperature as following: INCANDESCENT LIGHT, COOL LIGHT, SUN LIGHT, CLOLUDY, SUN SHADE.
  - **Manual RGB Mode**: Adjust white balance based on the selected RGB values.
- **2DNR**: 2 Dimensional Noise Reduction analyzes individual frames of video, identifying algorithmically and correcting those pixels that likely represent noise. Select whether to use this feature or not.
- **3DNR**: 3 Dimensional Noise Reduction analyzes the differences between successive frames in order to adjust pixels and improve fidelity. Select whether to use this feature or not.
- **Max AGC(Auto Gain Control) Gain:** Based on Selected maximum AGC gain, amplifies the video signal to make the screen brighter in low light conditions automatically. In the higher gain value, video noise may be increased.
- **Sens Up Level:** Based on selected Sens Up Level, lowering the shutter speed of the camera in low light conditions automatically.
- **WDR (Wide Dynamic Rage):** Wide dynamic range can improve the exposure when there is a considerable contrast between light and dark areas in the image. Enable WDR in intense backlight conditions.
- **Day & Night Control:**

- **Disable:** Color Mode.
- **Black & White:** Black & White Mode.
- **Auto:** Color mode for normal condition (daytime), Black & White for Low Light condition (Night Time).

- **Day & Night Dwelling Time:** Set the metering cycle of Light Sensor in seconds.
- **Day & Night Detect:**
  - **Internal:** Use built-in light sensor.
  - **External:** Use external light sensor.
- **The threshold of day to night:** This is the point of transition from Day to Night mode. Select between 1 and 32, and lower the value the earlier the transition point.
- **The threshold of night to day:** This is the point of transition from night to day mode. Select between 1 and 32, and lower the value the earlier the transition point.
- **Vertical Flip:** Rotate the image 180° vertically.
- **Horizontal Flip:** Rotate the image 180° horizontally.

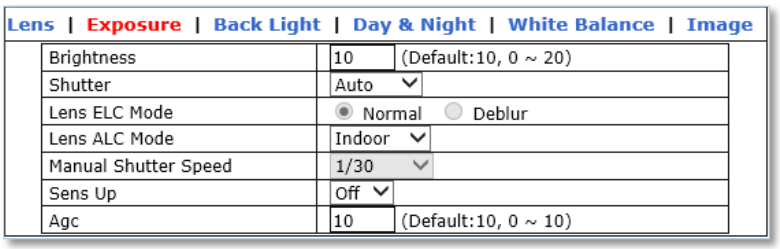
For following camera models:
FW1173-WS, FW1175-WM, FW1175-WS, FW1179-WM, FW1179-WS, FW7930-WSM, FW9302-WSM

Lens



- **Lens Type**:
  - **ELC**: When using a fixed or manual iris lens, the camera's ELC can adjust for moderate changes in illumination levels. While it is fine for indoor applications in fixed illumination conditions, a fixed iris and ELC circuitry cannot approach the range of illumination usable with an auto-iris lens and ALC circuitry.
  - **ALC**: When using an auto-iris lens, the ALC circuitry samples the illumination level and automatically adjusts the iris to create the proper sized aperture for proper exposure.
- **AF (Auto Focus) Mode**: Select whether to use auto focus feature or not.
- **Scanning**: Select scanning area for auto focus.
  - Half: Scanning half area for fast auto focus.
  - Full: Scanning full area for accurate focus.
- **Day & Night Auto Focus**: Automatically adjust focus when Day & Night mode is converted.

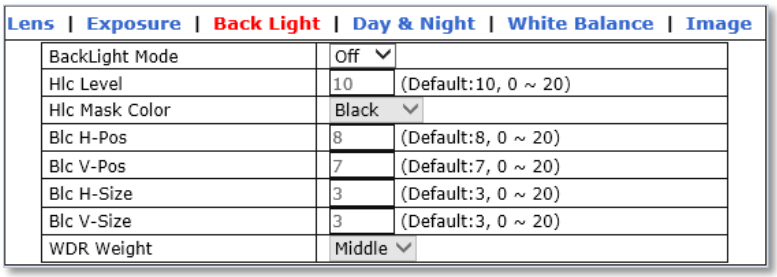
Exposure



- **Brightness**: Select the brightness of image between 0 and 20.
- **Shutter**: Select the shutter mode .
- **Lens ELC Mode**:
  - **Normal**: Use the default mode of ELC.
  - **Deblur:** Increase the image sharpness

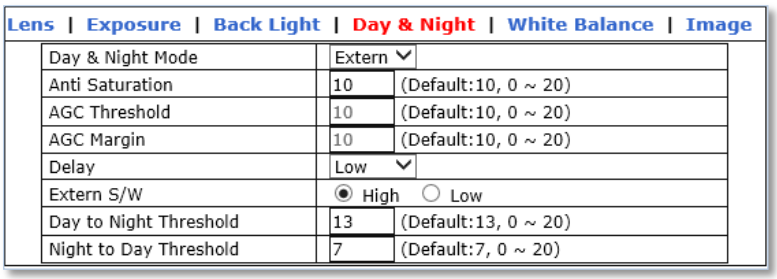
- **Lens ALC Mode**:
  - **Indoor**: Select if the camera is installed indoors.
  - **Outdoor**: Select if the camera is installed outdoor.
  - **Deblur**: Increase the image sharpness
- **Manual Shutter Speed:** Select shutter speed.
- **Sens Up:** Select Maximum Sens Up level, based on selected maximum Sens Up level, lowering the shutter speed of the camera in low light conditions automatically.
- **Agc (Auto Gain Control):** Select Maximum AGC (Auto Gain Control) level. Based on Selected AGC Max Gain, amplifies the video signal to make the screen brighter in low light conditions automatically. In the higher gain level, video noise may be increased.

Back Light



- **BackLight Mode**:
  - **OFF**: Disable Backlight features.
  - **HLC (Highlight Compensation):** Make masking to the high lighting area, like car head lighting.
  - **BLC (Backloght Compensation)**: BLC allows the camera to adjust the exposure of the entire image to properly expose the subject in the foreground.
  - **WDR (Wide Dynamic Range)**: WDR (Dynamic Contrast) can improve the exposure when there is a considerable contrast between light and dark areas in the image. Enable WDR in intense backlight conditions.
- **Hlc Level**: Select the HSBLC sensitivity level between 0 and 20.
- **Hlc Mask Color**: Select color of the HLC masking area.
- **Blc H-Pos:** Set the horizontal starting point for BLC area.
- **Blc V-Pos:** Set the vertical starting point for BLC area.
- **Blc H-size:** Set the width of BLC area.
- **Blc V-Size:** Set the height of BLC area.
- **WDR Weight:** Select the WDR sensitivity in WDR mode

Day & Night

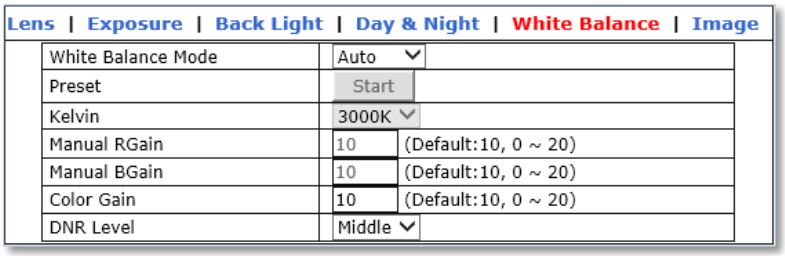


- **Day & Night Mode:**
  - **Auto**: Automatically converts the Day & Night mode depending on the amount of light.
  - **Color**: Color Mode
  - **B/W**: Black and White Mode

- **EXT**: Automatically converts the Day & Night mode depending on the built-in IR operation.

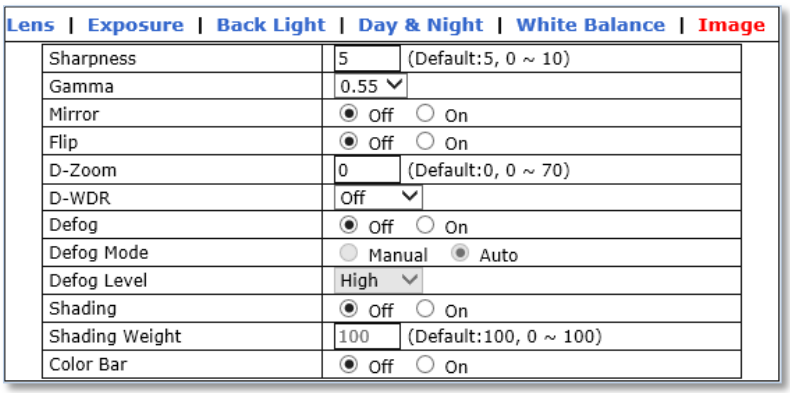
- **Anti-Saturation**: set the sensitivity level of anti-saturation which prevent the image saturation by IR reflection.
- **AGC Threshold**: Set AGC Threshold level.
- **AGC Margin**: Set AGC margin Level.
- **Delay**: Select the delay time. The day and night mode changes after the delay time when day and night mode switching conditions are met.
- **Extern S/W**: Select the switching mode of CDS.
  - **Low**: The Voltage changes low to high when CDS sensor covered.
  - **High**: The Voltage changes high to low when CDS sensor covered.
- **Day to Night Threshold:** Set the Day to Night mode transition sensitivity. Select between 1 and 32, and lower the value the earlier the transition point.
- **Night to Day Threshold:** Set the Night to Day mode transition sensitivity. Select between 1 and 32, and lower the value the earlier the transition point.

White Balance



- **White Balance Mode:**
  - **Auto**: Adjust white and gray-scale parameters in video, based on the color temperatures of the viewed scene automatically.
  - **Preset**:
  - **Manual**: Adjust white balance by changing red, blue, color gain and Kelvin values manually.
- **Preset:** Adjust white balance by changing color gain value.
- **Kelvin:** Select color temperature for adjusting white balance manually.
- **Manual RGain:** Select red gain for manual white balance.
- **Manual BGain:** Select blue gain for manual white balance.
- **Color Gain:** Select color gain for preset or manual white balance.
- **DNR Level**: Select digital noise reduction level.

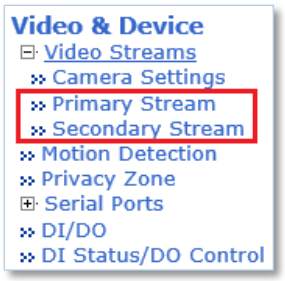
Image



- **Sharpness**: Select the sharpness of image between 0 and 10.
- **Gamma:**
- **Mirror:** Flips the video images to the left or right.
- **Flip:** Flip the video images up or down.
- **D-Zoom**: Select whether to use digital zoom feature or not.
- **D-WDR**: Select Digital Wide Dynamic Rage level to use D-WDR feature, or disable it.
- **Defog**: Through the defogging function, camera can automatically recognize fog concentration of the image, defog, self-correct in hazy, rainy, flue gas and other inclement weather to get a clear image.
- **Defog Mode**: The camera will automatically correct image according to the defogging level set by the user.
- **Defog Level**: The camera will adjust the definition of the image according to user's preferences through the defogging level.
- **Shading**: Corrects dark areas of the image.
- **Shading Weight**: Select the shading weight between 0 and 100.
- **Color Bar**: Display color bar on the screen.

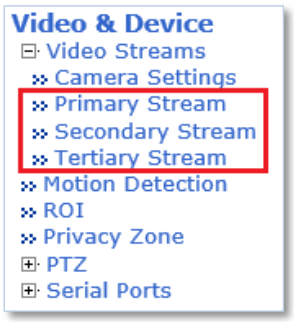
5.1.2 Primary Stream / Secondary Stream / Tertiary Stream

For the following camera models:
[Dual Stream Camera Models and FW3170 encoder]



Dual stream allows you to take advantage of two different streams from an IP camera. Primary stream can be high definition video for recording, while the Secondary stream can be a lower resolution for live display or supporting mobile. This allows for the NVR server or Clients to display more cameras while utilizing lower bandwidth and less CPU usage.

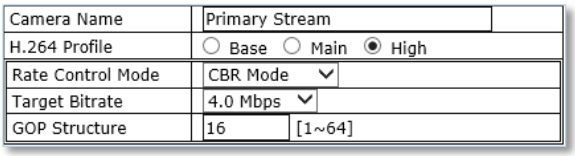
For the following camera models:
[Triple Stream Camera Models]



Triple stream has the advantage of dual-stream, and It is applicable to various networks, regardless of network bandwidth as high or low.

The Video Stream Configuration Menu will be displayed depending on the Compression Type and Rate Control Mode the user set as shown below.

H.264



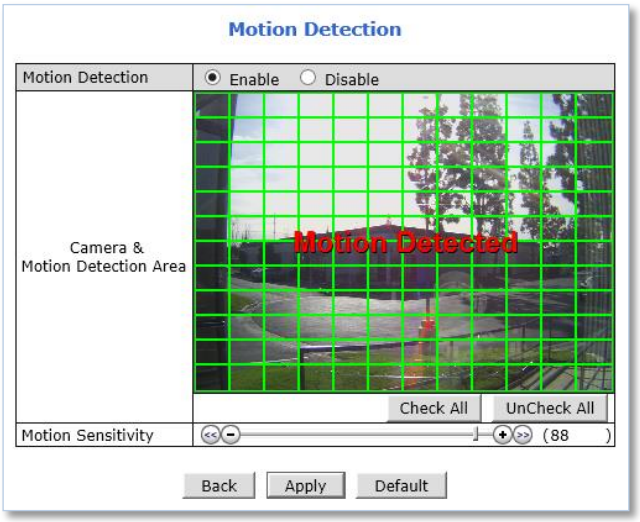
MJPEG

- **Camera Name:** Enter the name of the Stream or channel up to 21 alphanumeric or up to 10 Unicode characters.
- **Rate Control Mode:**
  - **VBR (Variable Bit Rate):** VBR allows higher quality images regardless of the amount of bandwidth used.
    - **Image Quality:** Select the image quality
      - **Available Image Quality:** Lowest, Low, Normal, High, Highest, Low Compression (Best Quality).
  - **CBR (Constant Bit Rate):** CBR allows the user to fix the bit rate stream, regardless of scene activity, complexity and resolution.
    - **Bit Rate Control:** Select the constant bit rate.
      - **Available Bitrate:** 32Kbps, 64Kbps, 128Kbps, 256Kbps, 512Kbps, 1.0Mbps, 1.5Mbps, 2.0Mbps, 3.0Mbps, 4.0Mbps, 5.0Mbps, 6.0Mbps, 8.0Mbps, 10Mbps, 12Mbps

- **GOP Structure:** The GOP value determines the sum total of P-frames and I-frames in a GOV. Setting the GOV-length to a high value saves considerably on bandwidth, but there may be noticeable image decay.

5.2 Motion Detection

Motion detection feature is enabled by default for all areas.



To disable the motion detection feature, Select **Disable** for the motion detection and click **Apply**.

To modify the motion detection area, please follow the steps below:

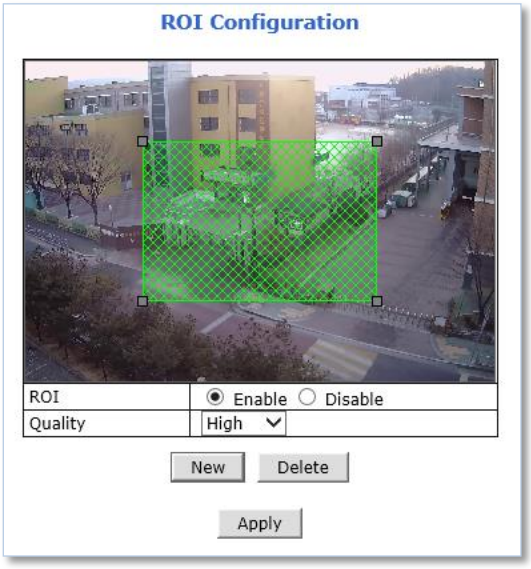
1) **Click** on any box in side scene to take out that area from motion detection.
   - Green Box: Motion Detection Area
   - Red Box: Excluded Area
2) Adjust **Motion Sensitivity** between -100 and 100. 100 is the most sensitive.
3) Click **Apply.**

5.3 ROI (Region of Interest)

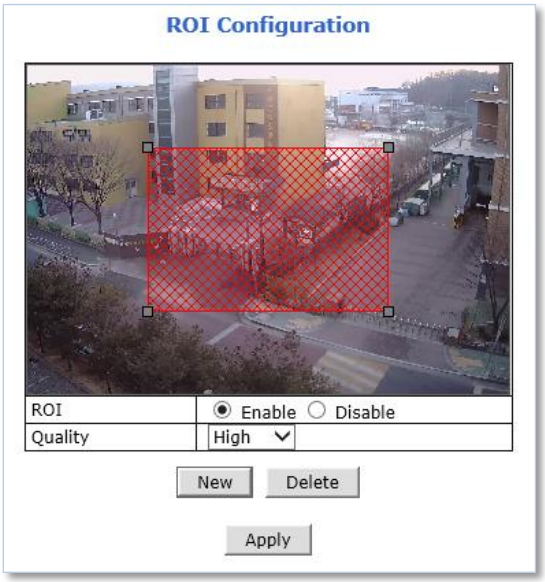
ROI feature allows the cameras to decrease non-ROI's image quality to save on maximum bandwidth and storage. These regions of interest will be smartly transmitted with better detail and image quality under identical bit rate streaming conditions.

To add a Region of Interest, please follow the steps below:

1) **Enable** ROI feature
2) Click **New**
3) Click **Green box** as shown below



4) When selected green box turns red, **set Region of Interest** as follows:
   - **Resize**- Click and hold any corner and drag to desired size
   - **Relocate**- Click and hold anywhere inside the box and drag to desired location



5) Select the **Quality** for region of interest

6) Click **Apply**

To delete a region of interest, **select** the region and click **Delete** followed by **Apply**.

5.4 Privacy Zone

Up to 8 privacy zones can be setup by users if certain parts of the screen need to be unmonitored.

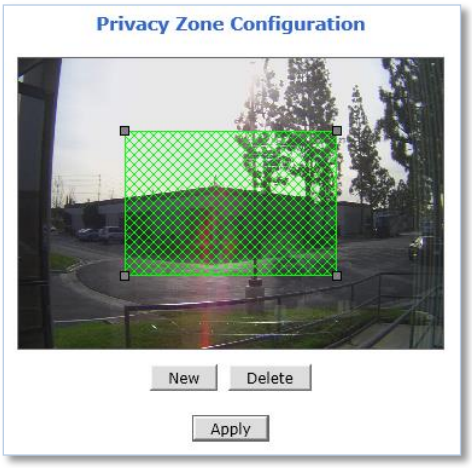
Privacy Zone Configuration Page

Live View

To add a privacy zone, please follow the steps below:

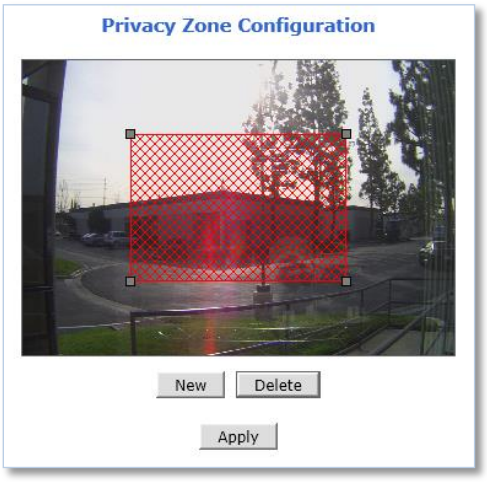
7) Click **New**

8) Click **Green box** as shown below



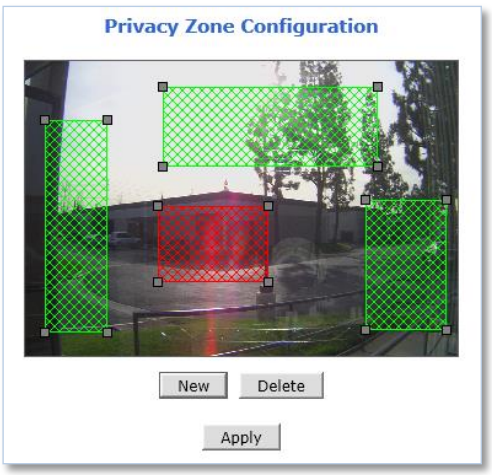
9) When selected green box turns red, **set Privacy Zone** as follows:

- **Resize**- Click and hold any corner and drag to desired size
- **Relocate**- Click and hold anywhere inside the box and drag to desired location



10) Click **Apply**

To delete a privacy zone, **select** the zone and click **Delete** followed by **Apply**.



5.5 Serial Ports

Any FlexWATCH® device that support serial ports has built-in COM and AUX port. These ports are used to communicate with external devices.

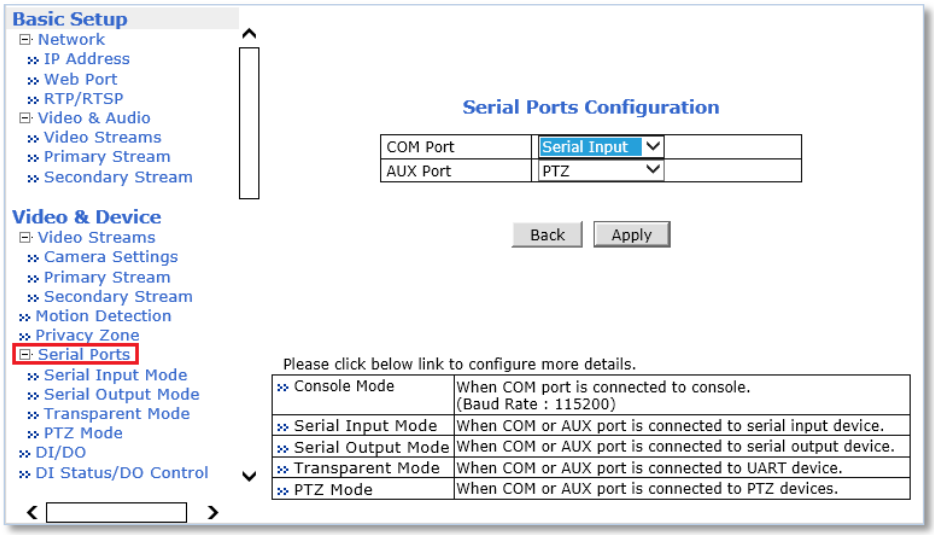
Generally, the COM port is used to console connection and AUX ports is used to PTZ connection.

5.5.1 Serial Input Mode

The FlexWATCH® device can be received data from the external device as an event in the Serial Input Mode. When event is occurred from the external device, the FlexWATCH® device can transmit received data with video images via email or FTP.

To configure Serial Input Mode, please follow the steps below:

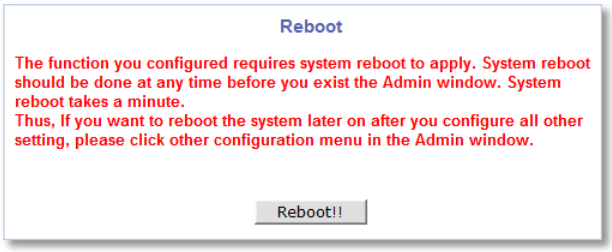
Select **Serial Port** under Device Configuration menu on Web Admin Page as shown below.



1) Select Serial Input for **COM** or **AUX** port and click **Apply**.

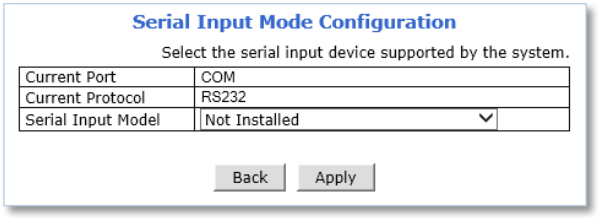
> *Note:*
> *COM Port: Console / Serial Input / Serial Output / Transparent (by pass)*
> *AUX Port: PTZ / Serial Input / Serial Output / Transparent (by pass)*

2) Click **Reboot** when reboot message appears as shown below.



3) When reboot is completed, login to the **Web Admin Page** again.

4) Go to Device Configuration -> Serial Ports -> **Serial Input Mode.**



5) Select a **Sensor Model** from the Serial Input Model drop down menu.

6) Enter the **sensor information** if necessary.

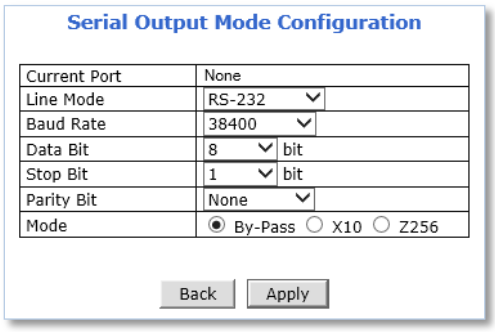
7) Click **Apply** to finish.

Note: For other than listed sensor or input unit, please contact our technical support team. Integration process may require.

5.5.2 Serial Output Mode

Specific commands can be sent from the FlexWATCH® device to UART (Universal Asynchronous Receipt and Transmission) device via RS-232 or RS-485/422 in the Serial Output Mode.

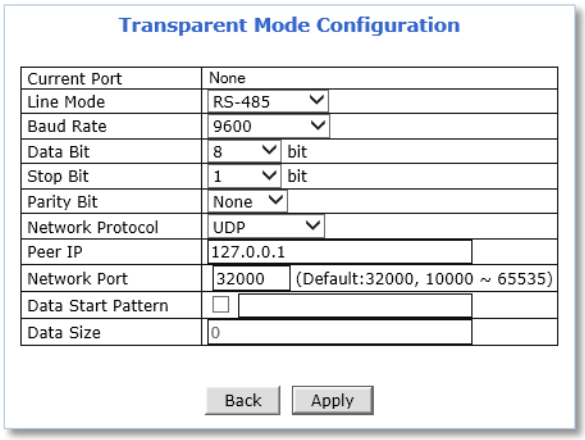
The FlexWATCH® device can be control UART devices such as Multiplexer, Access control system, any devices using X10 or Z256 Protocol.



To configure Serial Output Mode, select proper setting values and click **Apply**.

5.5.3 Transparent Mode

RS-485/422/232 data from the external device can be by passed to IP client or server through Ethernet in the transparent mode. IP Client/Server also allows controlling the external RS-485/422/232 device via FlexWATCH® device.

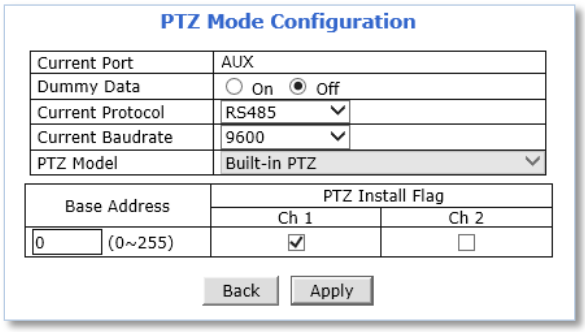


To configure Transparent Mode, please follow the steps below:

1) Select **connection type** from the drop down menu of Line Mode.
2) Select **connection speed** from the drop down menu of Baud Rate.
3) Select **Data** and **Stop Bit** size.
4) Select **Parity Bit** type.
5) Select **Network Protocol.**
6) Enter **Server/Client IP** in the Peer IP field.
7) Enter **Data Start Pattern** if necessary.
8) Enter **Data Size** per packet if necessary.
9) Click **Apply** to finish.

5.5.4 PTZ Mode [for FW3170 / FW1173 / FW1175 / FW1176 Models only]

PTZ cameras or receivers can be controlled via AUX port in PTZ mode.



To configure Serial Input Mode, please follow the steps below:

1) Select connection type from the **Current Protocol** drop down menu.
2) Select connection speed from the **Current Baud rate** drop down menu.
3) Select PTZ protocol from the **PTZ Model** drop down menu.
4) Enter **Base Address** to assign PTZ ID to the camera channels

   ID number for each channel will be assigned by sum of base address and channel number.

5) Check the desired **channel number**(s) to connect with PTZ
6) Click **Apply**

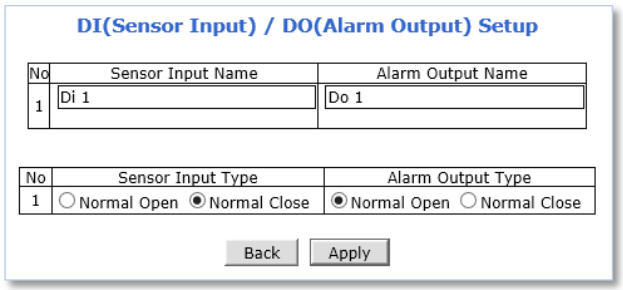
Note: Protocol (PTZ Model), Baud rate, ID number should be matched on both PTZ and FlexWATCH® device.

FlexWATCH® Supports 58 PTZ Protocols which are follows (firmware version 4.28):

Pelco-D-AUX : Spectra Dome	FINE : CPR-1600I
Pelco-P-AUX : Spectra Dome	Dongyang : DY-xxxx
Seyeon Tech : SRX-500/SPT-102	Bosch : Auto Dome
Seyeon Tech : FSD-230/270	Sungjin : SJ2000/SJ3000RX
Seyeon Tech : FSD-301	Honeywell : HRX-2000
ELMO : ELDOME	Inter-M : VRX2201
SANTEC : Santec Dome	LG : Speed Dome
Honeywell : HSDN-230/251(H)	LILLIN : PIH7000
Honeywell : HSDN-230/251(P)	Yujin : YRX-5000S
SAMSUNG : SCC641/643A	INTPLUS : Pelco-P PTZ1
SAMSUNG : SCC641/643A(RS422)	VICON : V-1311RB-600
SAMSUNG : MRX-1000	Pelco-D : SK-D106
VICON : V-1311RB	Pelco-D : Yujin
VICON : Surveyor-1000/2000	Pelco-D :-AUX : HUVIRON
SAMSUNG Techwin : SPD1600	Pelco-P-AUX : ONE KING
SAMSUNG Techwin : SRX-100B	Pelco-D-AUX : Probe
SAMSUNG Techwin : SRX-100-R	Honeywell : HSDN-P 251(H)
American Dynamics : DELTA DOME	Dong Yang : DMax Series
KALATEL : CYBER DOME(KTA-xxxx)	Pelco-D-AUX : Neo IR Dome
Panasonic : WV-CS854	RVT : EX Series
SONY : EVI-D30	Panasonic : WV-CW864A
CANON : VC-C4	E-ronix : Pelco-D
RNK : RNK-DOME	SONY : VISCA
ERNITEC : BDR-510	Pelco-D-WW-MD : Spectra Dome
Inter-M : VSD-640/625L	Sungjin : SJ2819RX3
Seyeon Tesh : SMP001	Convex : CXD Series
GPI360 : VISCA	Pelco-D-AUX : Convex
Pelco-D-AUX : YOUGUAN CCTV	Pelco-D-AUX : HANKOOK CTEC
Pelco-D-Wonwoo IR : Sprectra Dome	Pelco-D-AUX : Cynix

5.6 DI (Sensor Input) / DO (Alarm Output)

Depending on the number of DI ports supported, the numbers of ports that can be set are different as shown below, but the setting method is same for all models.



Example:
DI/DO 1 Port Models

To setup DI/DO port, please follow the steps below:

1) Enter **Sensor Input Name** and/or **Alarm Output Name** to the desired DI port number.

   (Up to 31 alphanumeric or 15 Unicode characters can be used for server name)

2) Select **Sensor Input Type** and/or **Alarm Output Type**.

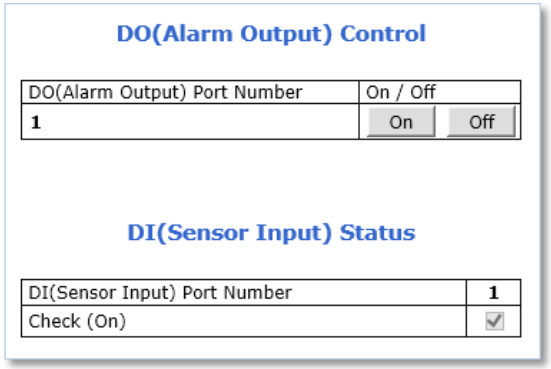
   - Normal Open Type: Normal is OPEN, and goes CLOSED when triggered by an event.
   - Normal Close Type: Normal is CLOSED, and goes OPEN when triggered by an event.

3) Click **Apply**.

> *Note: Make sure the type of the sensor and use it correctly to the type. If a Sensor Input is not used, it must be set to Normal Open Type to avoid a false input.*

5.7 DI Status / DO Control

Depending on the number of DI ports supported, the numbers of ports that can be controlled are different as shown below, but the controlling method is same for all models.



Example:
DI/DO 1 Port Models

External device that connected with the DO (Alarm Output) port can be tested as picture above.

- Click **On** to operate the external device connected with DO port.
- Click **Off** to stop operating the external device.

DI (Sensor Input) Status shows Sensor Status as shown picture above.
The check mark in the box indicates that the DI (Sensor Input) is activated. If there is no check mark in the box, means the DI is not activated.

6. Recording

Depending on FlexWATCH devices, HDD or SD card can be installed for video recording and playback. Recording conditions and storage related setting are available in this menu section.

> *Note: The maximum number of installable hard disk and maximum capacity available may vary depending on the NVR models.*

6.1 Disk Setting

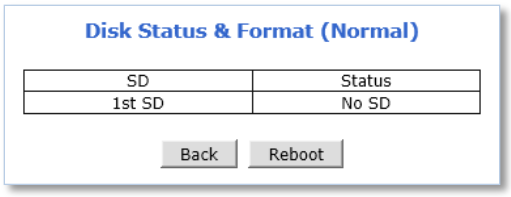
Recording storage related settings and information can be found here.

> *Note: A newly installed HDD or SD card must be initialized or formatted in the Disk Setting menu. All the HDD or SD card data will be deleted after the disk initializing or formatting.*

6.1.1 Disk Status & Format

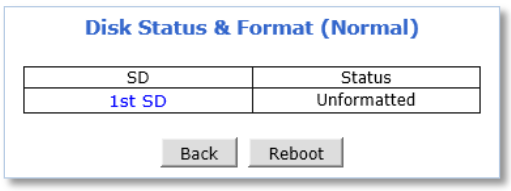
Depending on current disk status, the Disk Status & Format page will be displayed as follows:

- No SD: Micro SD card is not installed or recognized. Make sure that the Micro SD card is installed properly.



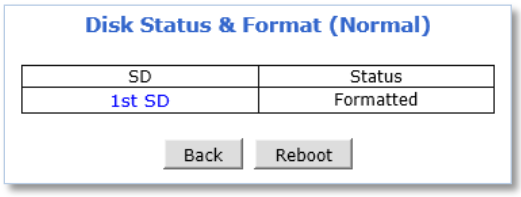
No SD

- Unformatted: Micro SD card is not formatted. A newly installed Micro SD card must be formatted.



Unformatted

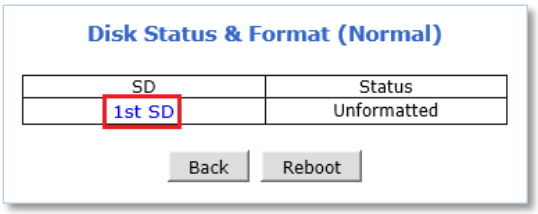
- Formatted: Micro SD card is ready for recording or under recording now.



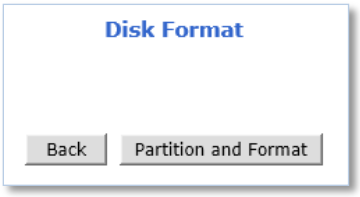
Formatted

To initialize or format the Micro SD card, please follow the steps below:

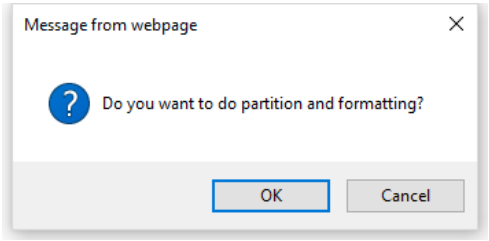
1) Click desired **Micro SD card** to format



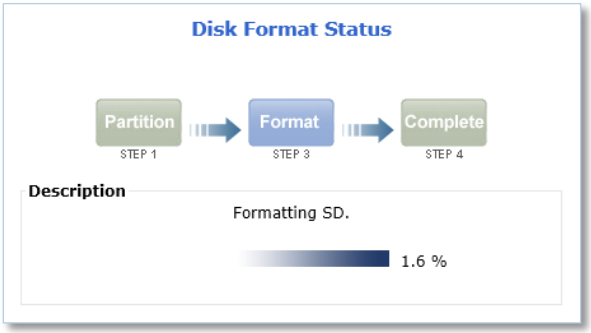
2) Click **Partition and Format**



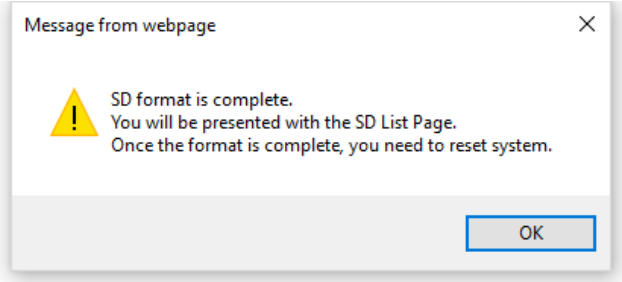
3) Click **OK** to continue when confirmation window appears



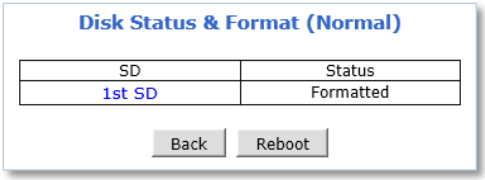
Warning: Do not leave HDD format Status page during the formatting. If an abnormal termination is happened during the formatting process, it is possible for the hard drive to be defected. Make sure to complete the process properly.



4) When done, click **OK** to finish formatting



5) Check the current status "**Formatted**" as shown below

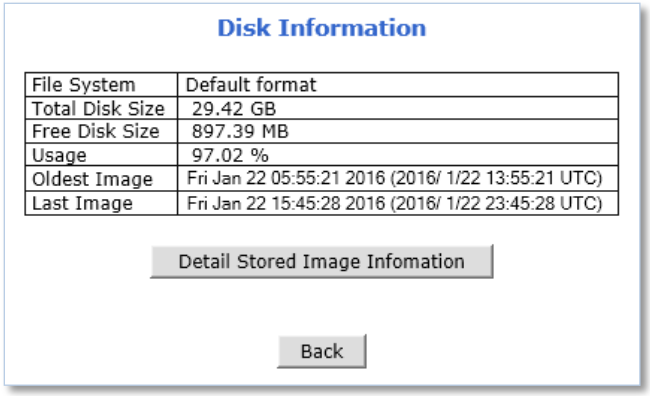


6) Click **Reboot**

Note: If the current status is not displaying "Formatted", it is possible for the Micro SD card to be defected. Make sure to complete the process properly.

6.1.2 Disk Information

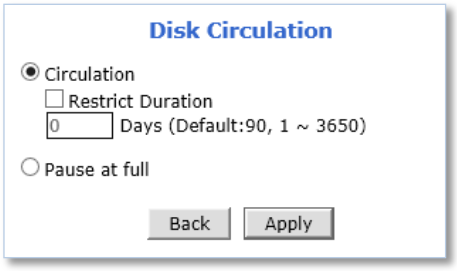
Detailed information of the installed Micro SD card can be found in Disk Information page as shown below.



- **File System**: Display current file system
- **Total Disk Size**: Display the capacity of the storage
- **Free Disk Size**: Displays the remaining capacity of the storage
- **Usage**: Display the storage usage
- **Oldest Image**: Shows the creation time of the oldest image files stored in the storage
- **Last Image**: Shows the creation time of the latest image files stored in the storage

6.1.3 Disk Circulation

The installed Micro SD card can be set whether or not to overwrite.



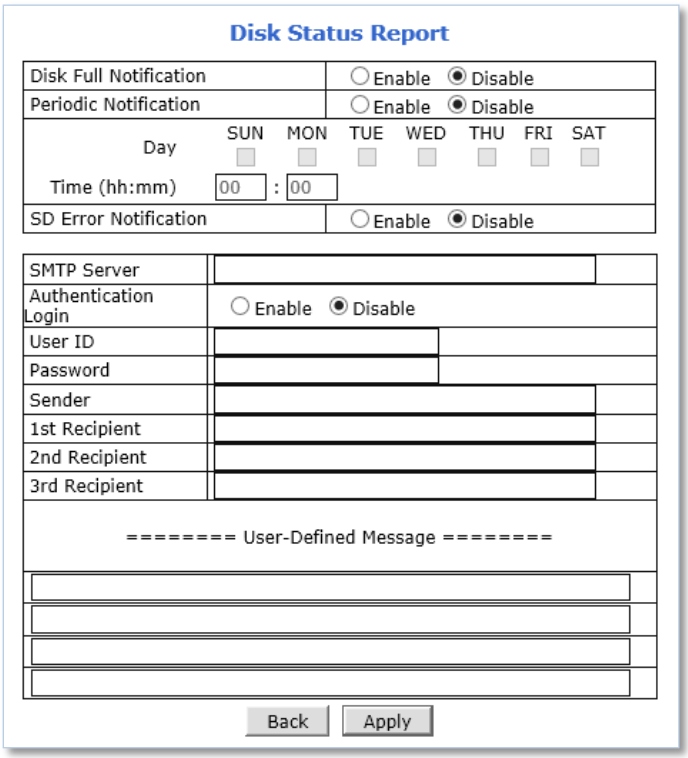
- Circulation: Overwrites old recorded data when the installed Micro SD card is full.
  - Restriction Duration: Record data only in the configured period and delete after the period.
  - Pause at full: Stops recording when the storage is full, and display STOP in the status as shown below.

6.1.4 Disk Status Report

Current status of the installed Micro SD card can be reported by email periodically or in the set conditions.

To setup the storage statures Report, please follow the steps below:

1) Set **Report conditions** as explained below



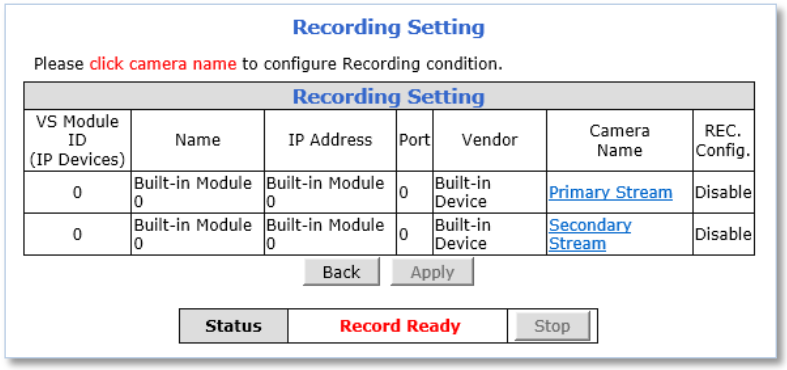
- **Disk Full Notification**: when the Micro SD card is full, notify by email.
- **Periodic Notification**: at a specified time, notify the Micro SD card status by email.
- **Disk Error Notification**: when the disk error occurred, notify by email.

2) Enter your **SMTP server** address
3) If your SMTP server requires **user authentication**, select Enable for Authentication Login and enter the user ID and Password for your SMTP server
4) Enter your **email address** in Sender field, which will show the message was sent from the FlexWATCH® device as a notification
5) Enter the **email addresses** of recipients up to 3 addresses
6) In the User-Defined Message box, you may enter any messages that will include with notification email
7) Click **Apply**

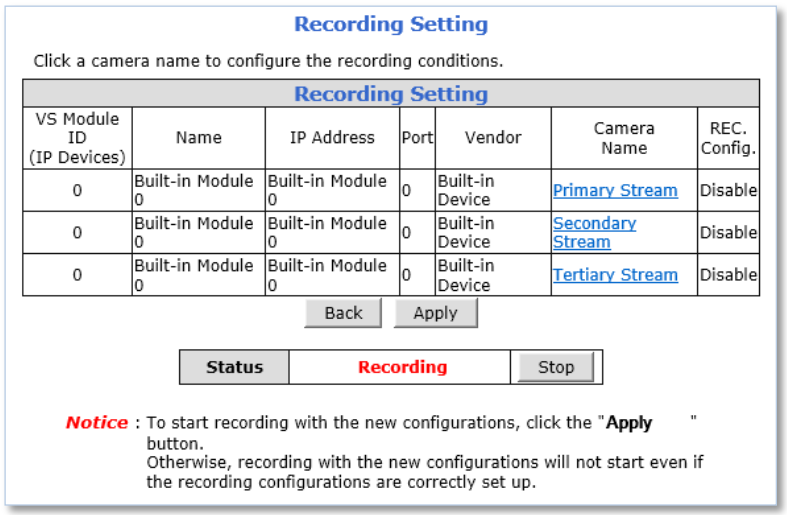
6.2 Recording Setting

Depending on number of video channels or streams supported, the Recording Setting page will be displayed as follows:

Note: The procedure of recording setting is same for all streams or channels.



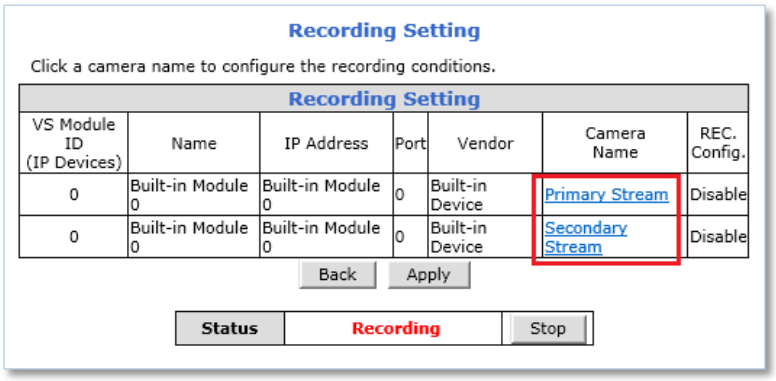
Example:
Dual Streams Camera Models.



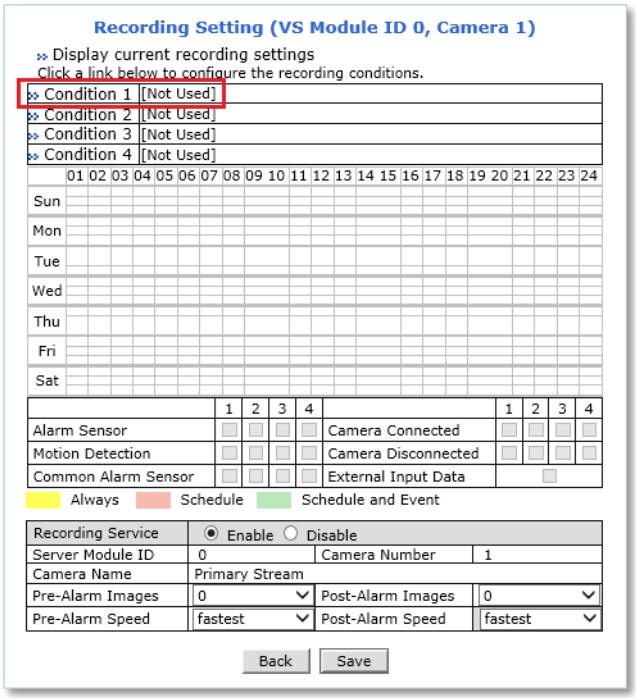
Example:
Triple Streams Camera Models.

To configure the recording, please follow the steps below:

1) Click on the **Camera Name** of the desired channel to record



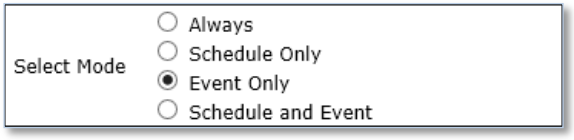
2) Click the first **Not Used Condition**



Note: Up to 4 conditions can be set.
If multiple conditions are set, recording starts when any one or more conditions meet. (Logical OR)

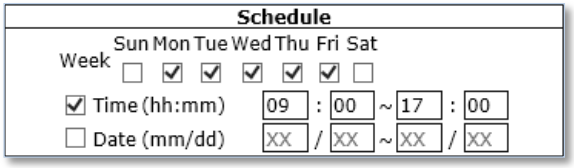
3) When the condition page appears, **Enable** the selected Condition

4) Select **Mode**

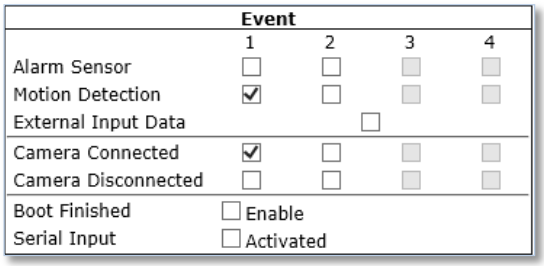


- Always: [Please do not use this mode for Email notification.]
- Schedule Only: [Please do not use this mode for Email notification.]
- Event Only: Send email when selected event occurred
- Schedule and Event: Send email when selected event occurs in specified time

5) Specify the **Recording Schedule** if necessary

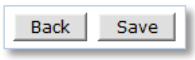


6) Select **Event Type**

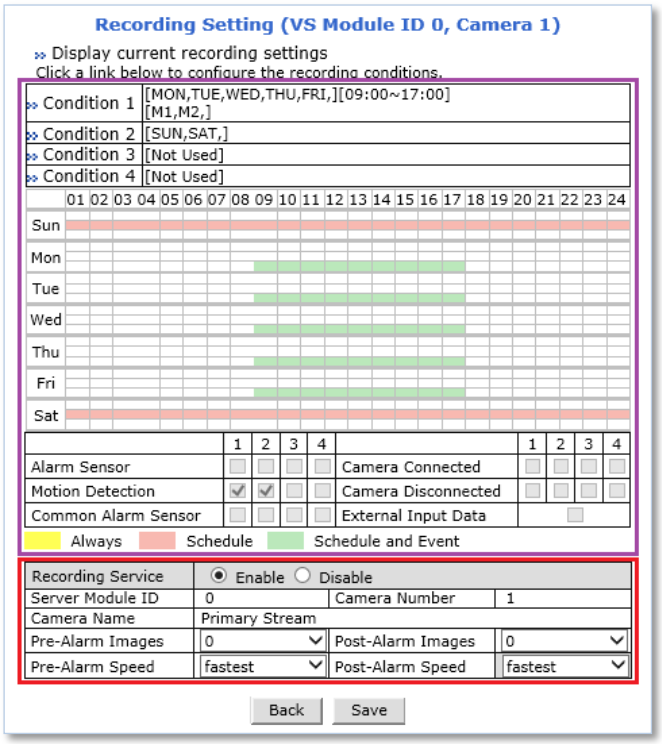


- Event will be triggered by the followings:
  - Alarm Sensor (Alarm Input)
  - Motion Detection
  - External Input Data such as POS.
  - Camera Connection
    - Connected
    - Disconnected
  - Boot Finished
  - Serial Input

7) Click **Save**



8) When the following page appears, check the summary in the purple box as shown below.



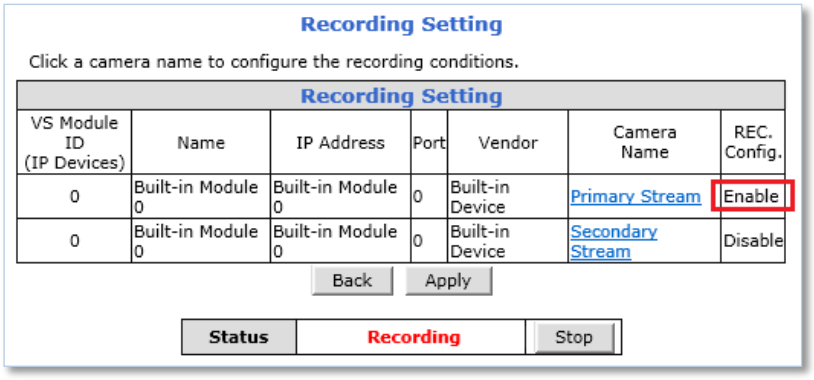
9) **Enable** for the Recording Service

10) Set Pre/Post Alarm Images, if necessary

Note: MJPEG Compression Type is required for Pre/Post Alarm Image features.

11) Click **Save**

12) When the following page appears, make sure the recording configuration is enabled as red box below

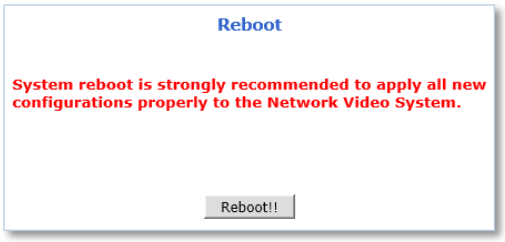


13) Go to step 1) if recording configuration is needed for other channels

14) Click **Apply** when the recording configuration is completed

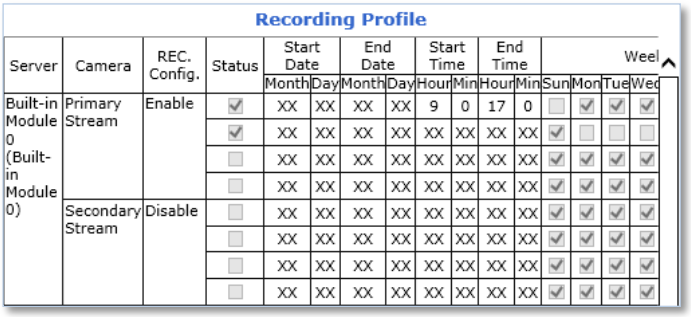
15) Click Record if recording status is “Stop” as shown below

16) **Reboot** the NVR as shown below



6.3 Recording Profile

Recording Profile shows current recording settings for all channels as shown below.

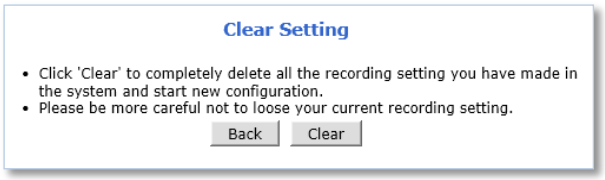


6.4 Clear Setting

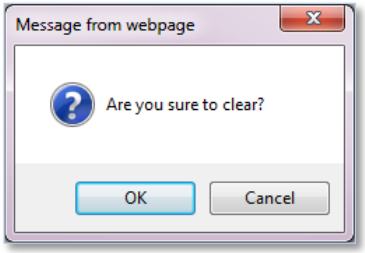
Recording configuration can be deleted or reset for the all channels in this menu.

To clear recording configuration:

1) Click **Clear** to clear or delete recording configuration



2) Click **OK** when confirmation message appears as shown below.

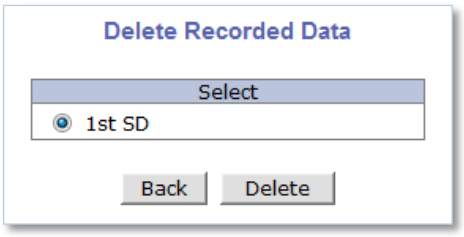


6.5 Delete Recorded Data

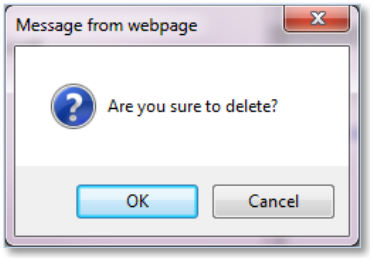
Recorded data in the Micro SD card can be deleted in this menu.

To deleted recorded data in the Micro SD card:

1) Select the **storage** to delete recorded data

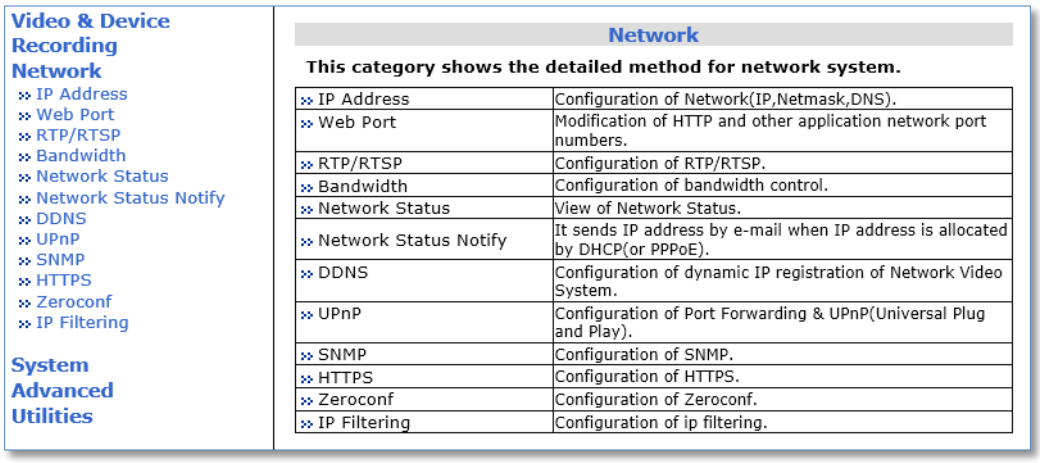


2) Click **Delete** to delete recording data
3) Click **OK** when confirmation message appears as shown below



7. Network

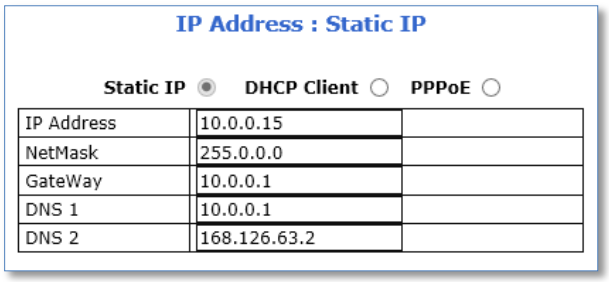
All network related settings can be found under the Network Menu.



7.1 IP Address

7.1.1 Static IP

For a Static IP, select **Static IP** and Enter IP information for the device such as IP Address, Subnet Mask (NetMask), Default Gateway (GateWay), DNS 1, DNS 2(Optional) and click Apply to save settings.

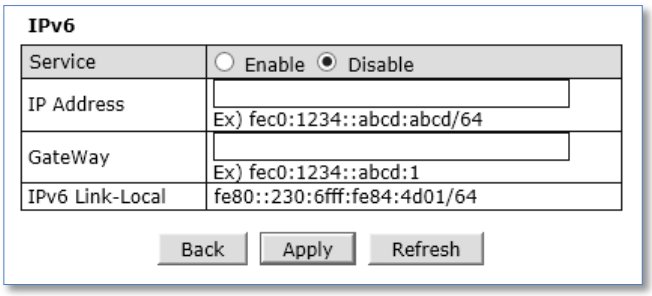


After selecting **Apply**, program will ask to close web browser for updates, which will take more than 20 seconds to reboot the device. If **Back** button is clicked, all values will be discarded. If **Refresh** button is clicked, the program will load previous values.

7.1.1.1 IPv6

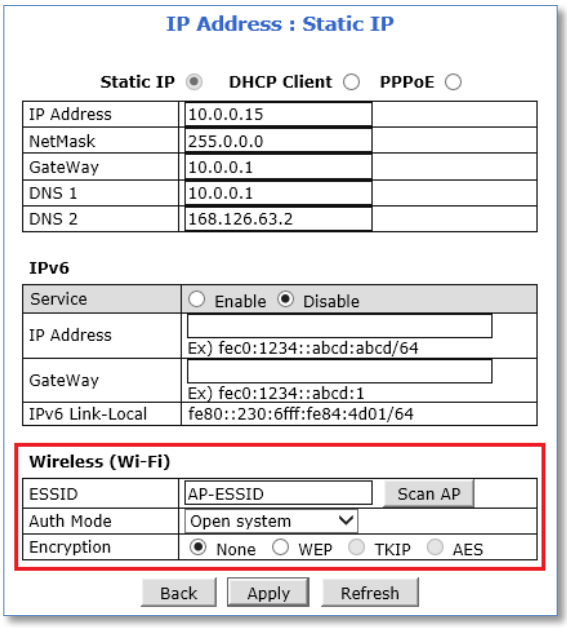
The FlexWATCH® devices support IP version 6 (IPv6).

To use IP version 6, enable the IPv6 service first, and then enter IPv6 IP address and Gateway.



7.1.1.2 Wireless (Wi-Fi)

Wireless setting menu appears at the bottom of network configuration setting page as shown below when the Wi-Fi USB Adapter is attached to the Wi-Fi support camera



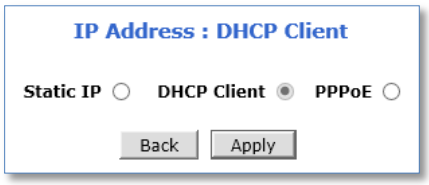
To use Wi-Fi connection, Enter ESSID(SSID) manually or scan and select your Wi-Fi network and then select authentication mode for the wireless network. Wi-Fi encryption method must be correctly applied to connect to the SSID.

> *Note: If both wired and wireless network are connected, wired network connection will take priority. After the wireless network settings through wired connection, unplug the network cable to connect Wi-Fi. It will take few minutes for initialization.*

7.1.2 DHCP Client

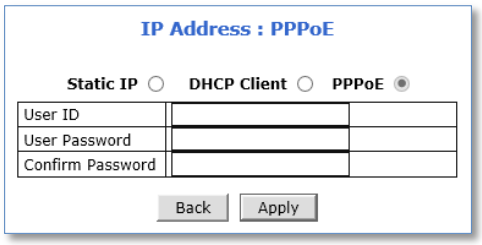
A Router providing an automatic DHCP Lease is required in the network for this option.

To use DHCP Client, select DHCP Client and click Apply to save. After **Apply**, program will ask to close web browser for updates, which will take more than 20 seconds to reboot the device.



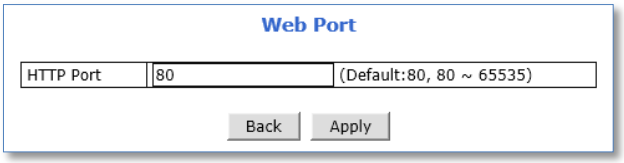
7.1.3 PPPoE

The FlexWATCH® devices can be connected directly to a PPPoE modem provided by the internet service provider usually with Internet Service Providers using DSL Login. To use PPPoE connection, enter User ID and Password for your PPPoE account and click Apply.



7.2 Web Port

Network or HTTP port is used to access FlexWATCH® devices and data exchange between the FlexWATCH® device (server) and clients if required. The port can be changed any number from 80 to 65535. The default value is 80.



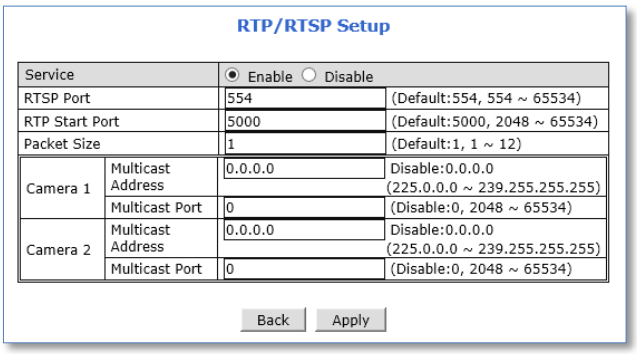
Note: If the HTTP port number is changed to a different value than default (80), make sure the new HTTP port number goes together with IP address of the FlexWATCH® devices. For example, when an IP address of FlexWATCH® devices is 192.168.1.100 and the HTTP port is changed 8080, you will have to enter http://192.168.1.100:8080 at the address bar on your web browser to connect to the device.

7.3 RTP / RTSP

RTSP (Real-Time Streaming Protocol) is a protocol to transfer video and audio streams over the network and it allows compatibility with other manufactures' VMS/NVR software or video streaming software such as VLC player, Quick Time player.

*For using the FlexWATCH® device as an **ONVIF device**, RTSP service must be enabled.*

To use RTP/RTSP protocol,



1) **Enable** RTP/RTSP service
2) Enter desired **RTSP** and **RTP Start Port**
3) Enter **Packet Size** (Kilobyte)
4) Click **Apply**

7.3.1 RTSP URL

FlexWATCH® device support two types of RTSP URL which are Unicast and Multicast.

- Unicast: rtsp://(Network Video Server IP Address)/***cam0_0***
  [***cam***(***0***: *VS Module number)_(***0***:**Channel/Stream number)]

- Multicast : rtsp://(Network Video Server IP Address)/***mcam0_0***
  [***mcam***(***0***: *VS Module number)_(***0***:**Channel/Stream number)]

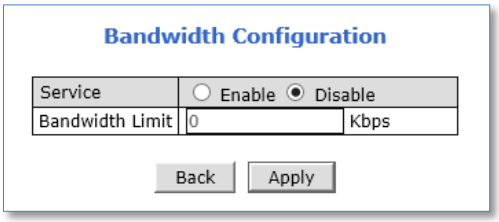
Usage
**VS Module number*
*Use "**0**" for:*
- Dual Stream Camera Models.
- 1/4 Channel Server (Video Server, NVR Server) Models.
*Use "**1**" for:*
- Channel #5~8 on 8Channel Server Models.

***Channel/Stream number*
*Use "**0**" for:*
- Primary Stream on Dual Stream Camera Models.
- Channel #1 on 1/4/8 Channel Server Models.
- Channel #5 on 8 Channel Server Models. (VS module ID should be 1)
*Use "**1**" for:*
- Secondary Stream on Dual Stream Camera Models.
- Channel #2 on 1/4/8 Channel Server Models.
- Channel #6 on 8 Channel Server Models. (VS module ID should be 1)
*Use "**2**" for:*
- Channel #3 on 4/8 Channel Server Models
- Channel #7 on 8 Channel Server Models. (VS module ID should be 1)
*Use "**3**" for:*
- Channel #4 on 4/8 Channel Server Models
- Channel #8 on 8 Channel Server Models. (VS module ID should be 1)

7.4 Bandwidth

Bandwidth control is for limiting the maximum network traffic.

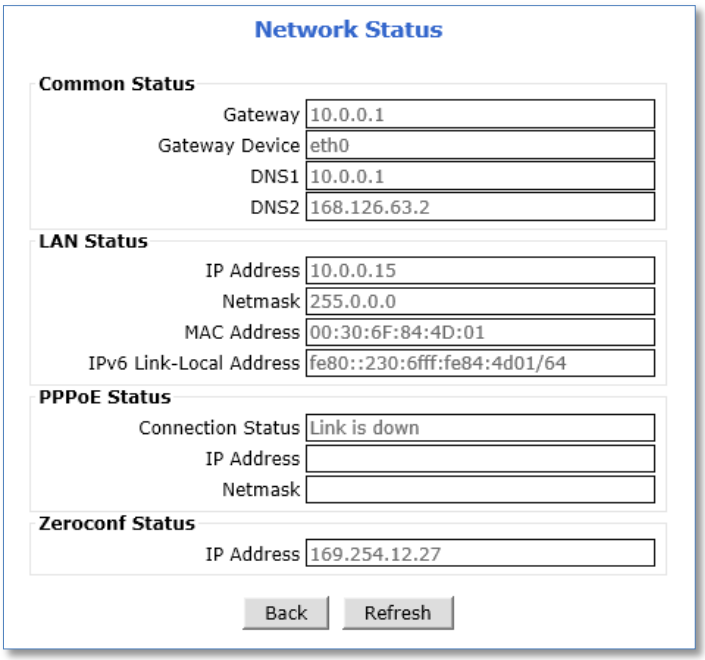
If the Bandwidth Control Configuration is enabled, maximum data size transferred from the FlexWATCH® device won't exceed bandwidth limits set by users. If transferred data is exceeded, part of the data will be randomly lost. If multiple users try to access a FlexWATCH® Device when bandwidth control is enabled, users connected to the FlexWATCH® device will share network bandwidth limit.



Note: This bandwidth control feature works well in M-JPEG video transmission. But, for H.264, dropping data packets may cause low quality of video, so it is recommended to utilize CBR and frame rate control instead of bandwidth control for H.264 video
Network Bandwidth control is managed by FlexWATCH® device and it drops any data packets when data packets exceeds bandwidth limit, thus you may experience slow connection when this feature is enabled.

7.5 View Network Status

Selecting Network Status will provide details of the FlexWATCH® devices.
If wireless connection is set, wireless connection status will be displayed at the bottom.



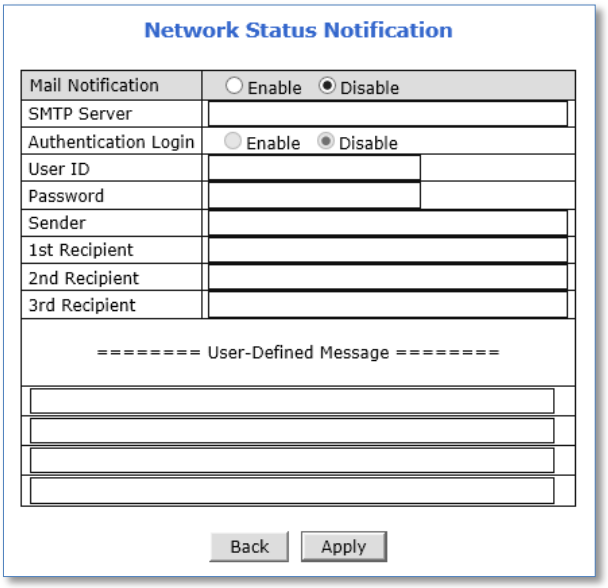
7.6 Network Status Notify

Network Status can be notified to the administrator by email when

- IP address of the FlexWATCH® device has been changed by DHCP server
- FlexWATCH® device has been connected to a PPPoE Server

Note: This feature is valid only for DHCP or PPPoE connection.

To configure the Network Status Notify feature, please follow the steps below:

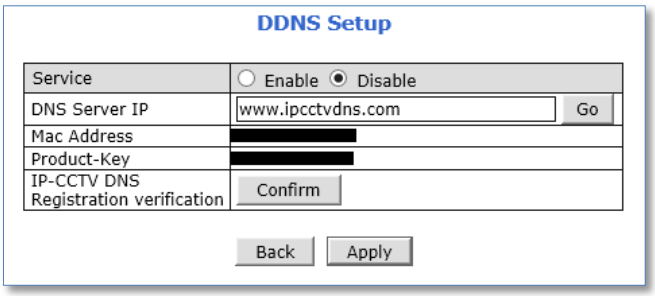


1) Select **Enable** to use Mail Notification feature
2) Enter the **SMTP server** address
3) If the user authentication is required by SMTP server, select **Enable** for Authentication Login and enter the **user ID** and **Password** for the SMTP server
4) Enter an email address of the **Sender** in Sender field, which will be appeared as the sender in notification email
5) Enter an email address of recipient (up to 3 email addresses are available)
6) In the **User-Defined Message** box, please enter any messages that will be included within the notification email
7) Click **Apply**

7.7 DDNS

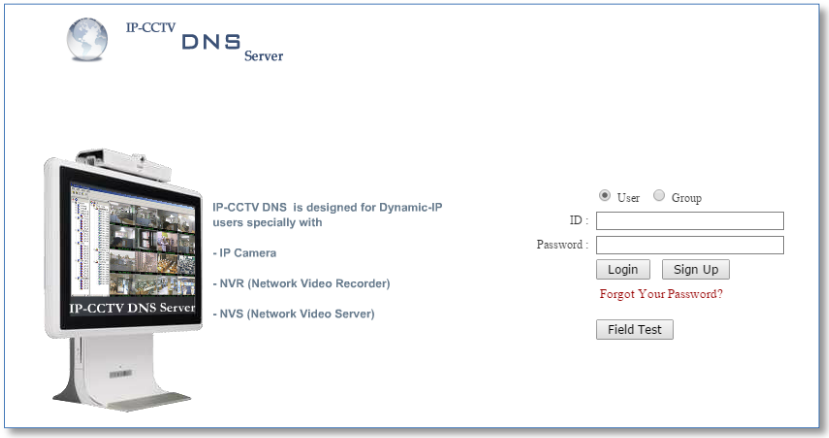
IP-CCTV DNS™ (As known as DDNS service) provides a domain name to connect to a remote site. DDNS is used when the Internet Service Provider is using a Dynamic IP address that is always changing every two to three months.

To activate IP-CCTV DNS™ service, please follow the steps below:



1) Select **Enable** to use IP-CCTV DNS™ service

2) Click **Go** to go to IP-CCTV DNS™ web site or go to www.ipcctvdns.com directly through the web browser

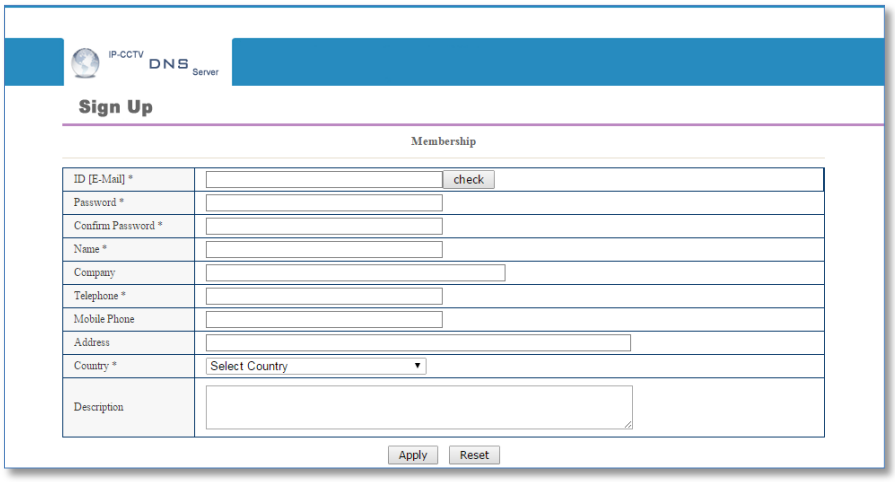


3) Click **Sign Up** to create an account if you do not have one

   If you have one, proceed from the step 6

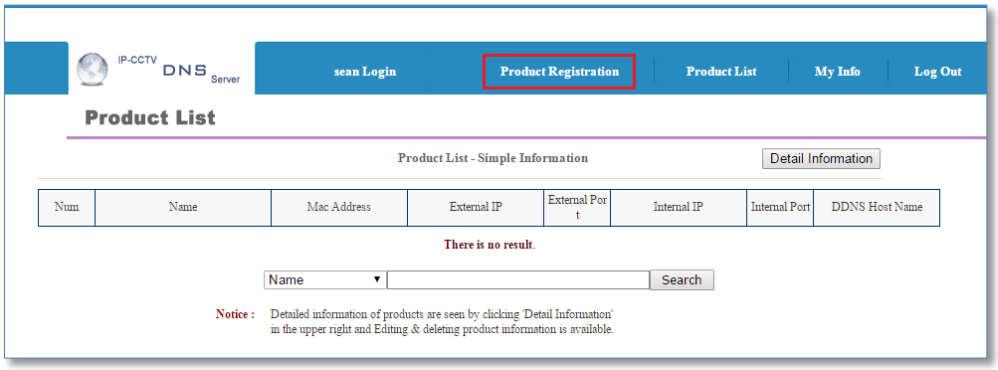
4) Select "I Agree" and click **Next** as shown below

5) Enter the information requested such as ID, Password and Name, and then click Apply to finish

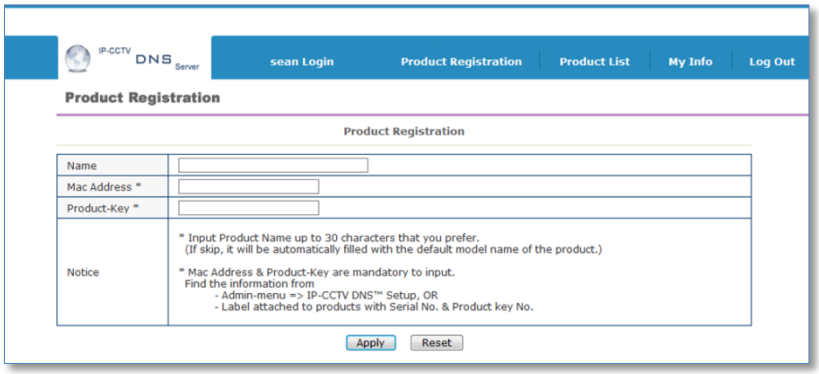


6) **Login** to the IP-CCTV DNS™ with the ID and password

7) Click on **Product Registration** on Top Menu as shown below

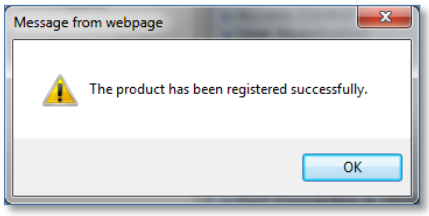


8) Enter the information requested (Camera Name, MAC Address, Product Key) and Click Apply as shown below

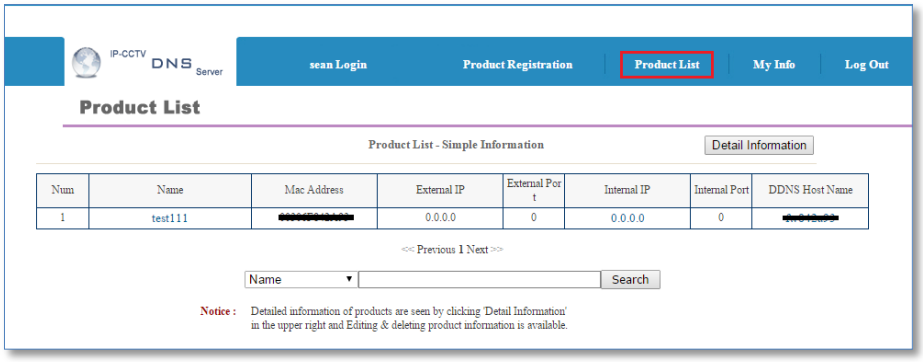


*Note: Mac Address and Product Key will be available at the sticker on the FlexWATCH® device or on the **IP-CCTV DNS™** setting page under Network Configuration Menu of the Web Admin Page.*

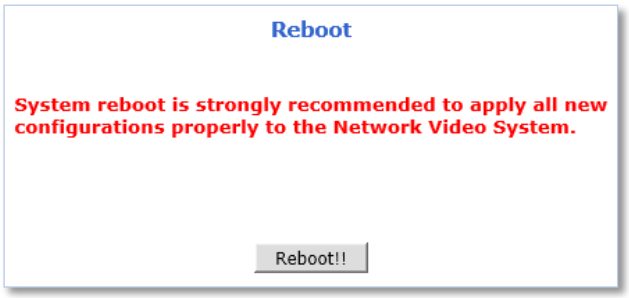
9) Click **OK** to confirm that the device has been registered successfully as shown below



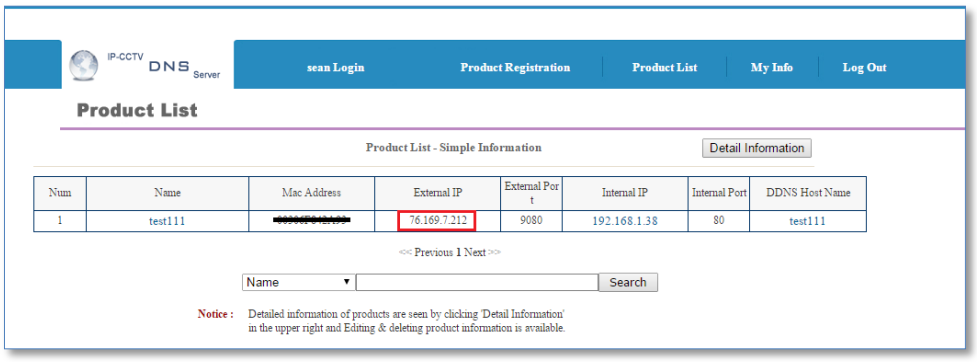
10) Click **Product List** as shown below



11) **Reboot** the FlexWATCH® device at Reboot page under Utilities menu of the Web Admin Page



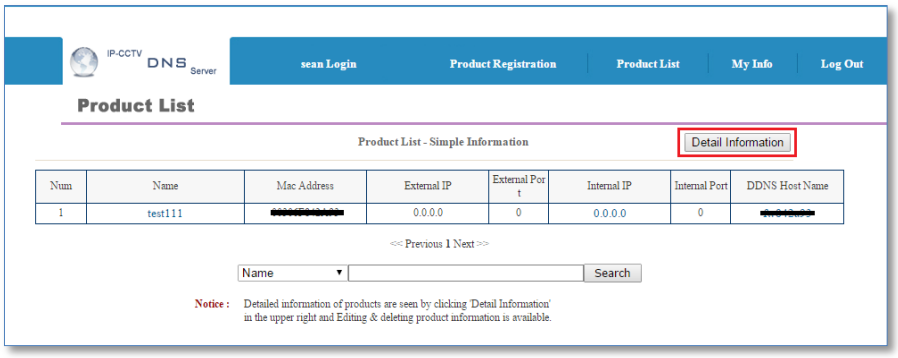
12) When the device reboot is complete, return to the Product List page on your browser and refresh the Product List page until your current public **IP address** is displayed as shown below



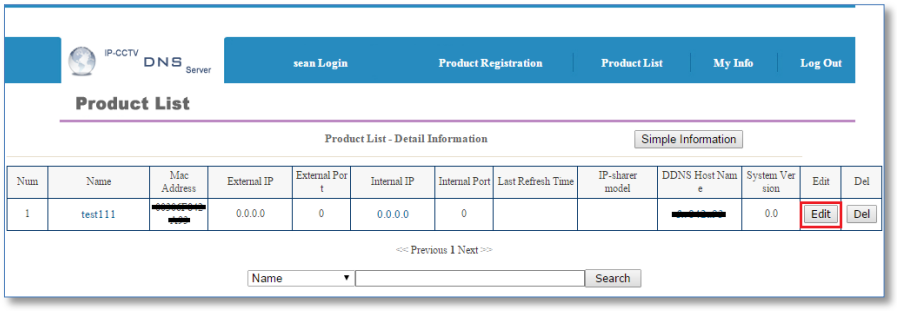
Note: "[DDNS Host Name].ipcctvdns.com" will be used as your domain name or URL for remote access. You may change your DDNS Hose Name.

To change the DDNS Host Name, please follow the steps below:

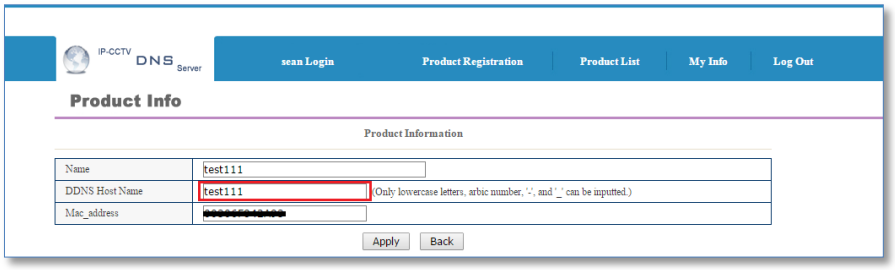
1) Click **Detail** Information as shown below



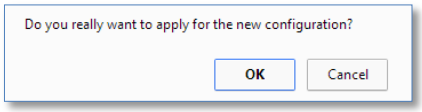
2) Click **Edit** as shown below

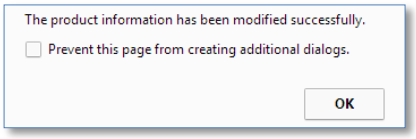


3) Enter Desired **Host Name** and click **Apply**

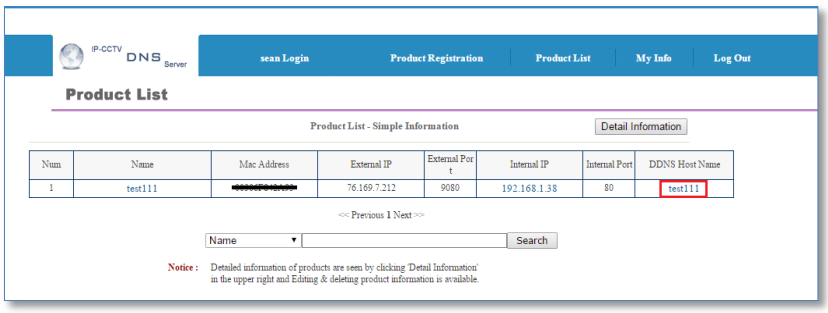


4) Click **Ok** when the following messages appear





5) Check your changed **DDNS Host Name** as shown below

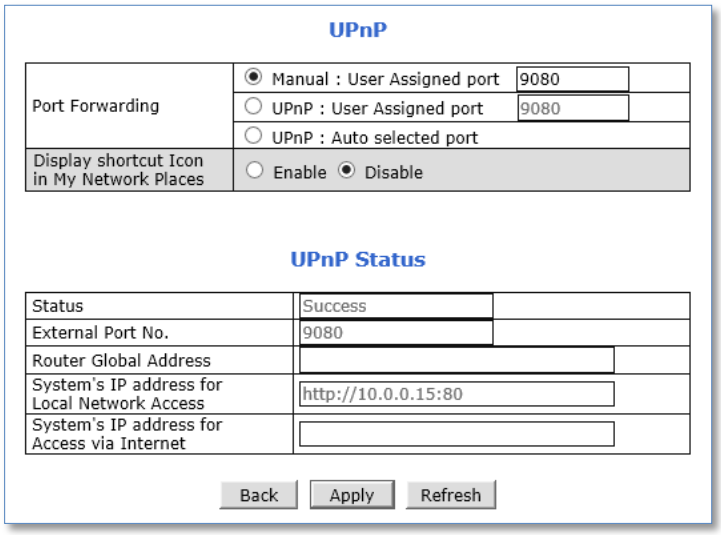


7.8 UPnP

7.8.1 UPnP Port Forwarding

UPnP port forwarding will allow an IP device to communicate with an UPnP compatible network router for simplified local network device access as well as remote access via the Internet. In order to allow for UPnP port forwarding, UPnP supported router is required.

To do UPnP port forwarding, please follow the steps below:



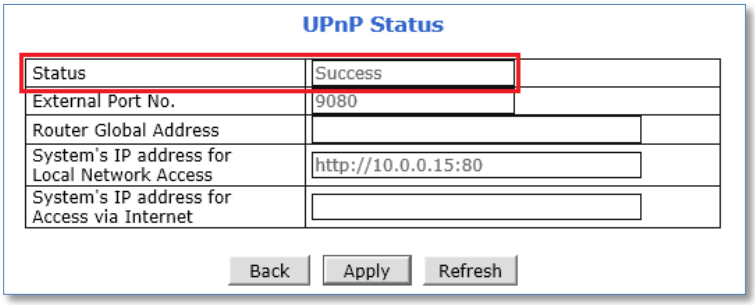
1) Select one and follow the directions for each options:

   - **Manual (User Assigned Port)**: Enter the port number that you set in the router and click Apply.

     Note: Port forwarding is required for the Manual option.

   - **UPnP (User Assigned Port)**: Enter desired port number and click Apply
   - **UPnp (Auto Selected Port)**: Click Apply

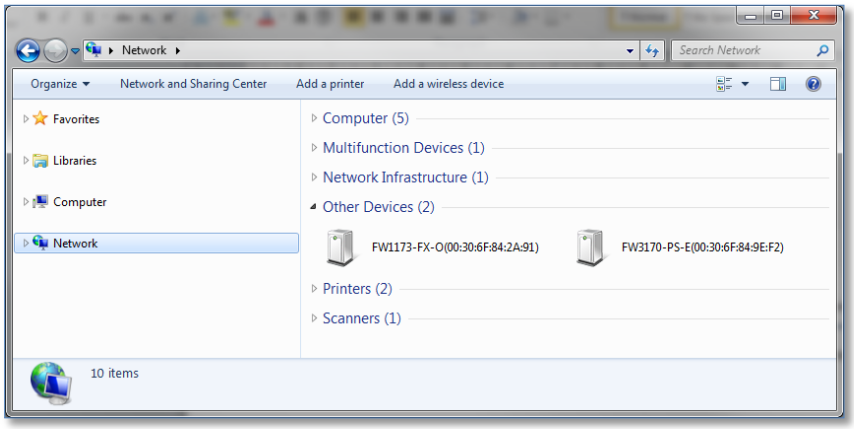
2) When the UPNP port forwarding process is done successfully, "**Success**" message will be appeared as shown below



If error message appears, check whether the router's UPnP support and ensure that UPNP is enabled

7.8.2 Display Shortcut Icon in My Network Place

Display shortcut Icon in My Network Places option will allow you to access the FlexWATCH® device via **Windows Explorer** as shown below.



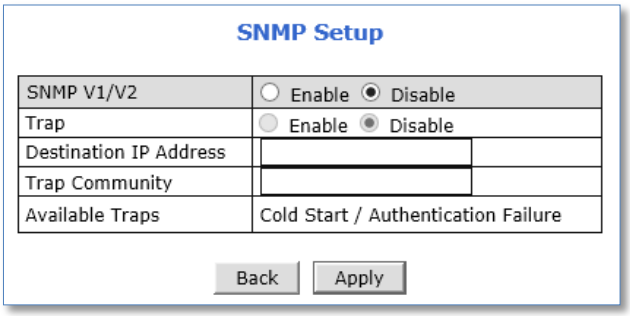
Note: For using this feature, Windows™ XP with Service Pack 2 (SP2) or higher version of Windows™ is required.

7.9 SNMP

SNMP (Simple Network Management Protocol) allows network management operators to use standard SNMP (SNMP) tools to monitor the status of FlexWATCH® devices.

Note: SMTP Version 1 and 2 are supported based on MIB-2.

When selecting SNMP under Network Configuration menu, SNMP setting page will be displayed as shown below.



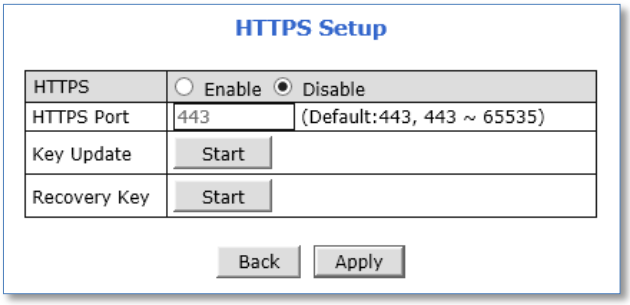
To use SNMP,

1) **Enable** SNMP V1/V2 protocol.
2) **Enable** for SNMP TRAP service if necessary.
3) Enter the **IP address** of the server to receive SNMP Trap messages in Destination IP Address field.
4) Enter the **Trap Community.**
5) Click **Apply**

7.10 HTTPS

HTTPS (Hyper Text Transfer Protocol Secure) is identical to HTTP but provides enhanced security. The data transferred is encrypted using Secure Socket Layer (SSL) or Transport Layer Security (TLS). This security method applies encryption to the data itself.

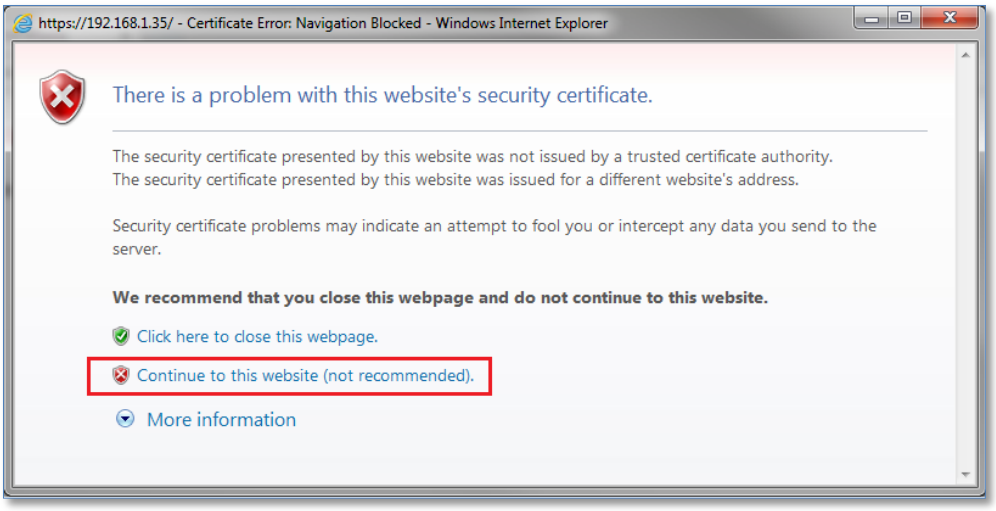
To use HTTPS connection, please follow the steps below:



1) **Enable** HTTPS feature.
2) Change **HTTPS port** if necessary.
3) Click **Apply**.

> *Note:*
> *HTTPS connection is made only when your login to the Web Admin Page.*
> *You may enter a key issued by a certificate authority.*
> *Entered Key can be reset with the Recovery Key Start button if necessary.*

Certificate Error message may be displayed if the key is not certified or not valid as shown below.

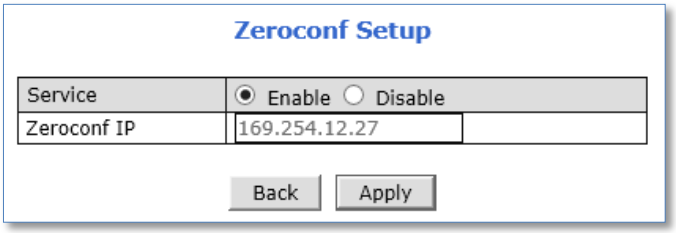


Click **Continue to this website** if the above message appears.

7.11 Zeroconf

Zero-configuration networking (zeroconf) is a set of technologies that automatically creates a usable computer network based on the Internet Protocol Suite (TCP/IP) when computers or network peripherals are interconnected. It does not require manual operator intervention or special configuration servers.

To use Zero Configuration Network, enable the service and click apply.

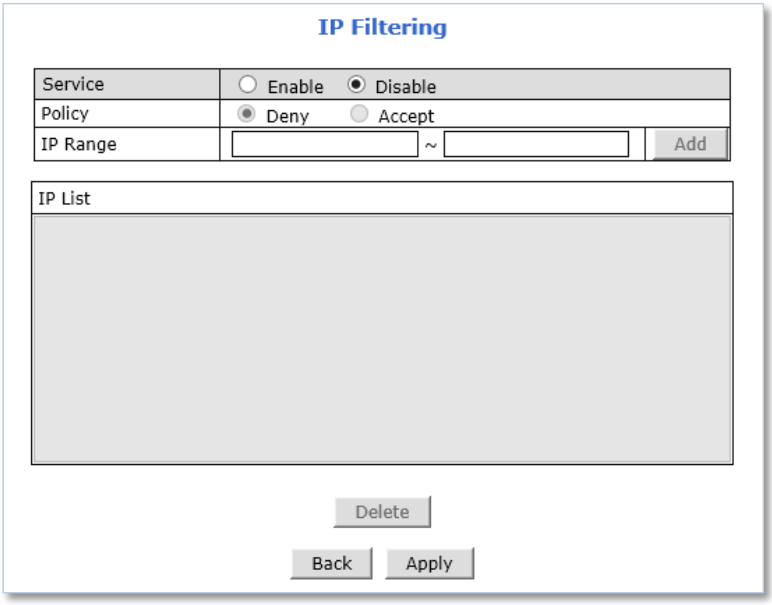


Example of Zero-configuration Network:

```
eth0:11   Link encap:Ethernet  HWaddr
          inet addr:169.254.152.186  Bcast:169.254.255.255  Mask:255.255.0.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
```

7.12 IP Filtering

Enable IP Filtering to allow or deny access to FlexWATCH® device. Once enabled, the IP addresses in the IP list will be allowed or denied access to the device based on the choice of policy.



To use IP Filtering,

1) **Enable** the IP Filtering Service.
2) Select **Policy**.

3) Enter **IP Range** (for adding single IP, type the IP address in to the both 'From' and 'To' boxes).

4) Click **Apply** when you done entering IP.

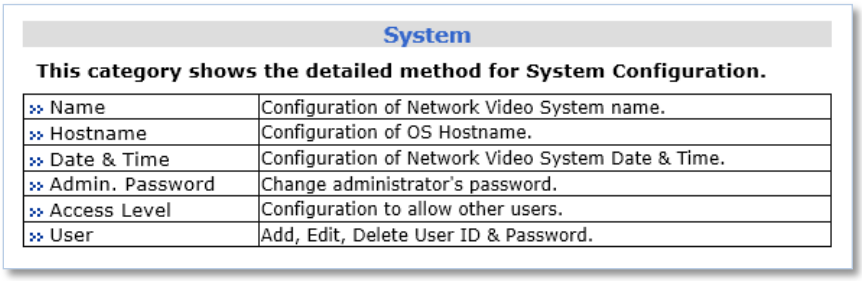
To delete the IP or IP range, **select** the **IP** or IP range in the IP list and click **Delete**.

Note:

If "Deny" is selected for the policy option, The IP of the current PC which connected to the admin page should not be in the list to continue your settings.

If "Accept" is selected for the policy option, The IP of the current PC which connected to the admin page should be in the list to continue your settings.

8. System



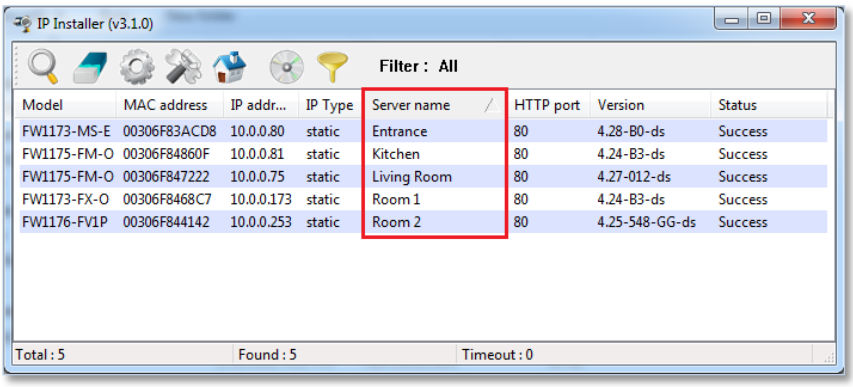
System

This category shows the detailed method for System Configuration.

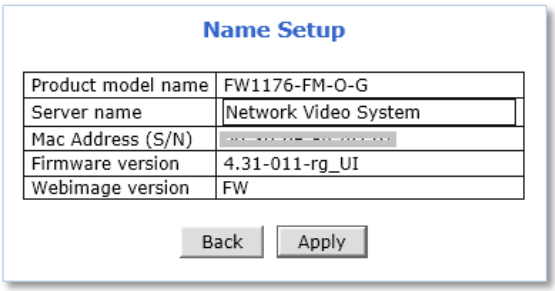
Name	Configuration of Network Video System name.
Hostname	Configuration of OS Hostname.
Date & Time	Configuration of Network Video System Date & Time.
Admin. Password	Change administrator's password.
Access Level	Configuration to allow other users.
User	Add, Edit, Delete User ID & Password.

8.1 Name

Server Name is used to identify all devices easily in the same network as example below.



System information such as **Product Model Name**, **Server Name**, **MAC address**, **Firmware Version** and **Web Image Version** will be displayed in this page as shown below.



Name Setup

Product model name	FW1176-FM-O-G
Server name	Network Video System
Mac Address (S/N)	[redacted]
Firmware version	4.31-011-rg_UI
Webimage version	FW

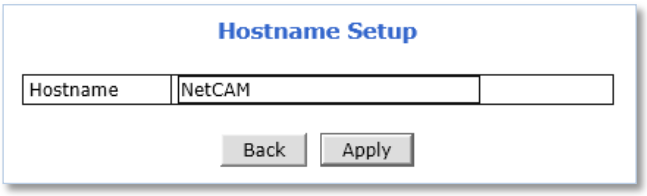
Back Apply

To change the Server Name, enter a new **Server Name** in the server name field and click **Apply**.

Note: Up to 21 alphanumeric or 10 Unicode characters can be used for server name.
Server Name can be changed via IP Installer also.
For more detailed information about IP Installer, please refer to IP Installer User Manual.

8.2 Hostname

Hostname is a label that is assigned to a device connected to a network and that is used to identify the device in network communication such as email, telnet.

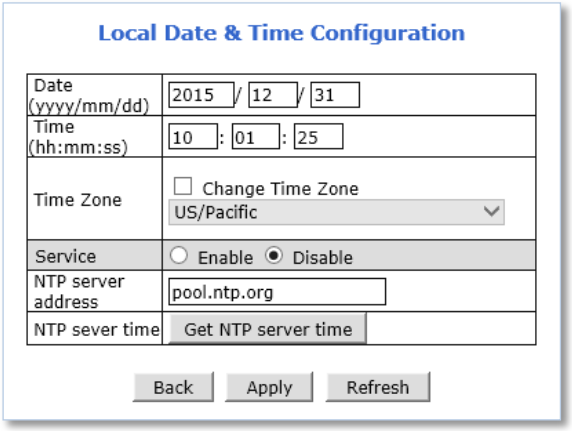


To change the Hostname, enter a **new Hostname** in the Hostname field and click **Apply**.

8.3 Date & Time

Applying the correct date and time is strongly recommended to avoid any confusion or errors caused by time difference between the FlexWATCH® device and client (remote access) PC.

When selecting Date & Time under System Configuration menu, Local Date & Time configuration setting page will be displayed as shown below.



Date & Time can be set manually or automatically synced with a specified NTP (Network Time Protocol) server every 24 hours.

To change Date and Time manually, please follow the steps below:

1) Enter current **Date** and **Time**
2) Select **Time Zone** if necessary
    a) Check on Change Time Zone
    b) Select your region from the dropdown list
3) Click **Apply**

    * Device reboot is required if Time Zone is changed.

To sync current time automatically with NTP server, please follow the steps below:

1) Select **Time Zone** if necessary
2) **Enable** Service

3) Enter **NTP server address**. (default = "pool.ntp.org")

   * The NTP Server's IP address or host name must be specified.

4) Click **Get NTP server time** and then wait until the time changed

   * If "Fail to get NTP server time" error message is appear, check the following status:

   - Internet Connection
   - NTP server

5) Click **Apply**

   * Device reboot is required if Time Zone is changed.

> *Note:* ***NTP*** *(Network Time Protocol) is a protocol for synchronizing the clocks of the Network devices. With NTP service, you can synchronize your FlexWATCH® device to an internet time server.*

8.4 Admin. Password

Administrator's password should be changed occasionally to secure the FlexWATCH® device.

When selecting Admin. Password under System menu, Administrator's Password configuration page will be displayed as shown below.

To change the password for the administrator, please follow the steps below:

1) Enter **current password** in the Old Password field
2) Enter new password in the **New Password** and **Confirm Password** fields
3) Click **Apply**
4) Enter new password when login window appears

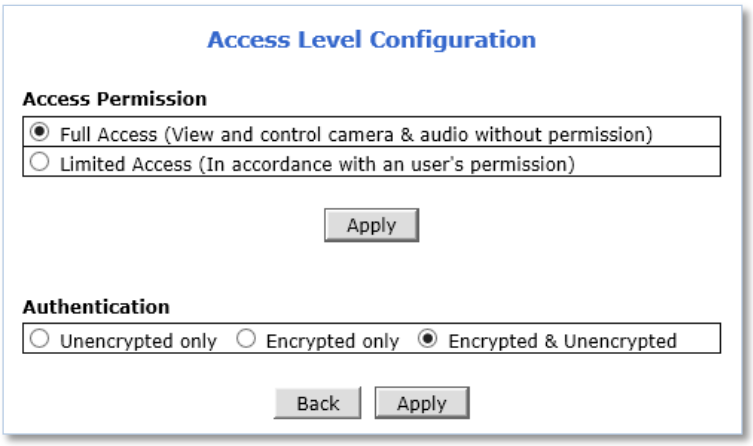
> *Note: Default ID for admin account is fixed with "**root**" and is not allowed to be changed. Password is encrypted when it stored in FlexWATCH® device. Therefore, there is no way to find out the password if lost. If the password has been lost, reset the device with FD (Factory Default) button on the device. In this case, all setting values will be factory defaulted.*

8.5 Access Level

You can select whether to use password authentication when Smart (Live) Viewer login.

Note: Administrator's password should be changed occasionally to secure the FlexWATCH® device.

When selecting **Access Level** under System menu, Access control setting page will be displayed as shown below.



Access permission

- **Full Access**: Allow anonymous Smart (Live) Viewer login, **authentication** is **not required.**
- **Limited Access**: Allow registered user Smart (Live) Viewer login, **authentication** is **required.**

Authentication

- **Unencrypted only**: Authentication process is not encrypted.
- **Encrypted only**: Authentication process is encrypted using a Digest (MD5).
- **Encrypted & Unencrypted**: Both encrypted and unencrypted authentication can be used in the authentication process.

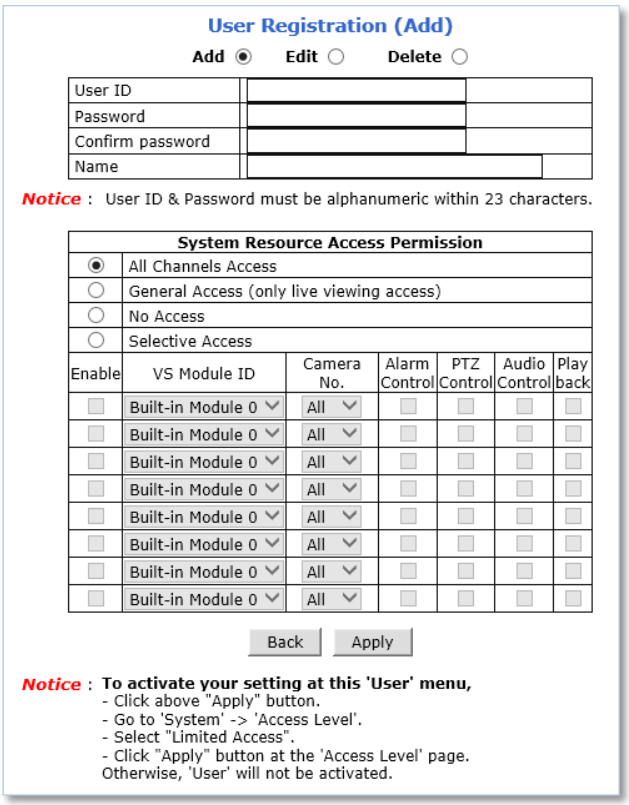
Note: Web browser must be restarted for applying any changes of access level.

8.6 User

Note: Limited Access must be set on the Access Level setting page for user's privilege or access permission.

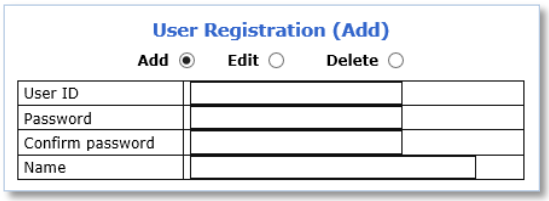
Users can be added, modified, and/or deleted by the administrator. Once registered as Limited Access setting, the user can access the FlexWATCH® device with some limited privileges.

When selecting User Registration under System Configuration menu, User Registration setting page will be displayed as shown below.

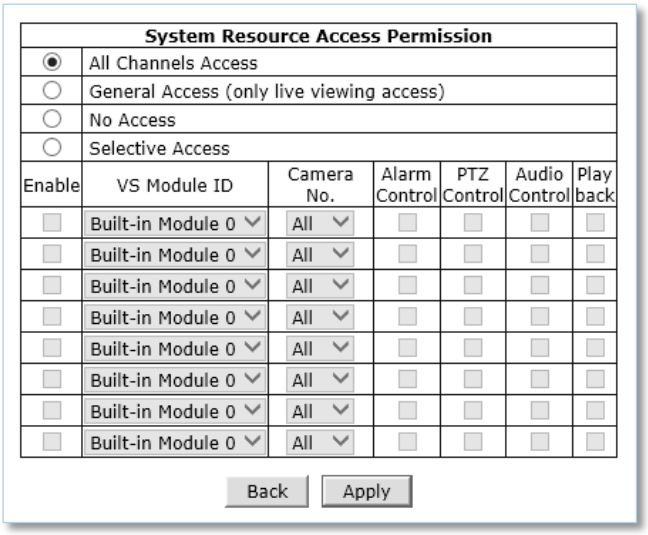


8.6.1 Add

To add a new user, follow the steps below:



1) Select **Add** from the top 3 selection menu
2) Enter the new **User ID** you want to create
3) Enter new password in the **New Password** and **Confirm Password** fields for the new user
4) Enter **user name**

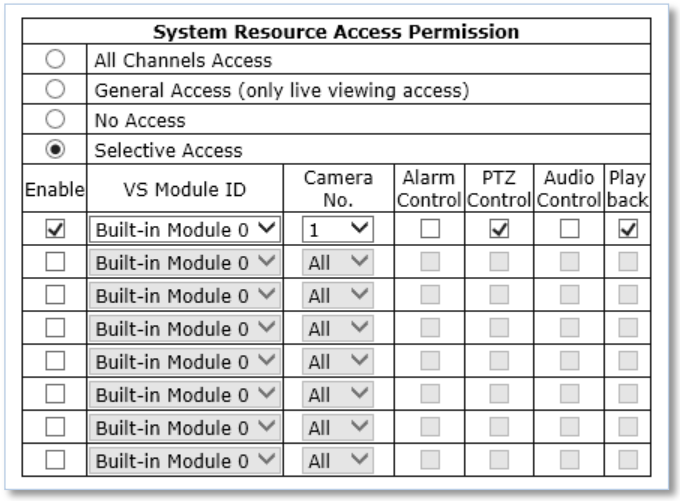


5) **Select** one from the following **access permission** for the following features:

- Live Monitoring, Alarm control, PTZ control, Audio control, Playback
  - **All Channels Access**: The user has authority to access all channels and features
  - **General Access** (only live viewing access): Live monitoring is allowed only to the user
  - **No Access**: The user is not permitted to access the device at all
  - **Selective Access**: The user is allowed to access selected channels and features

6) If other than Selective Access permission is selected, skip to the step 11.

7) Check **Enable** to select access camera channel and features as shown below



8) Select VS Module ID

- Bulit-in Module 0: Select for the FlexWATCH® camera models, 4 channel server models or 1~4 camera channels of 8 channel server models
- Built-in Module 1: Select for the camera channel 5~8 of FlexWATCH® 8channel server models

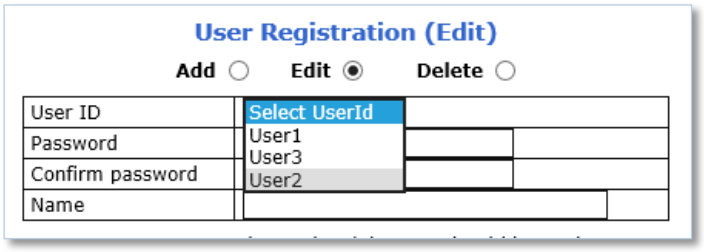
9) Select **Camera Number**

10) Select the **features** for the selected channel

11) Click **Apply**

8.6.2 Edit

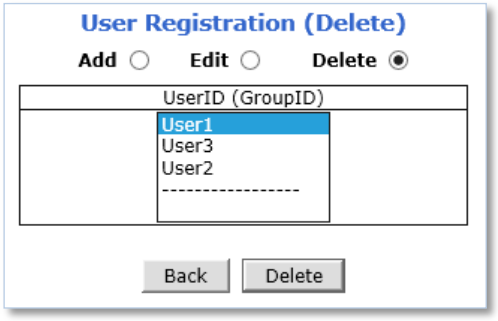
To edit a user account, follow the steps below:



1) Select **Edit** from the top 3 selection menu
2) Select desired **User ID** to change the user account setting
3) After changing desired item, click **Apply**

8.6.3 Delete

To delete a user account, follow the steps below:



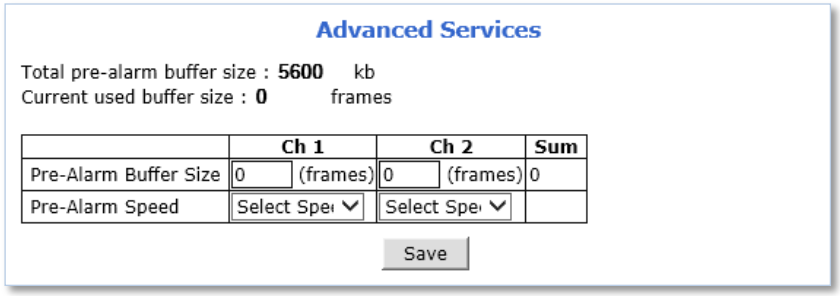
1) Select **Delete** from the top 3 selection menu
2) Select desired **User ID** to delete the user account
3) Click **Delete**

9. Advanced

Advanced features or services such as email notification, FTP, alarm out can be setup in this menu section.

9.1 Advanced Services

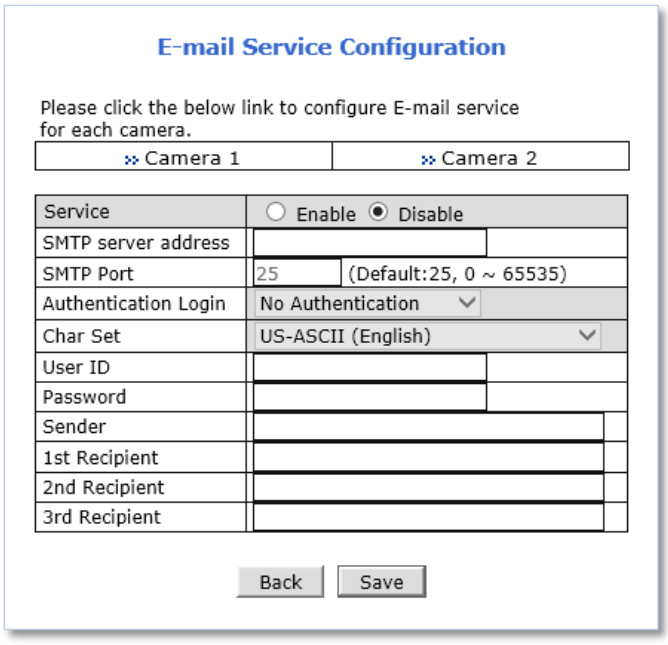
Pre-Alarm buffer size and buffering speed can be defined here.



- **Pre-Alarm Buffer Size:** You can set the buffer size which will store the images before event. The unit is in frame, and each channel can be set with different values. The total number of frames for Pre-Alarm buffer and Post-Alarm Buffer is limited to 10 frames.
- **Pre-Alarm Speed:** Buffering speed can be set. If it's set to Fastest, the server will store images as fast as it can. Each cannel can be set with different values.

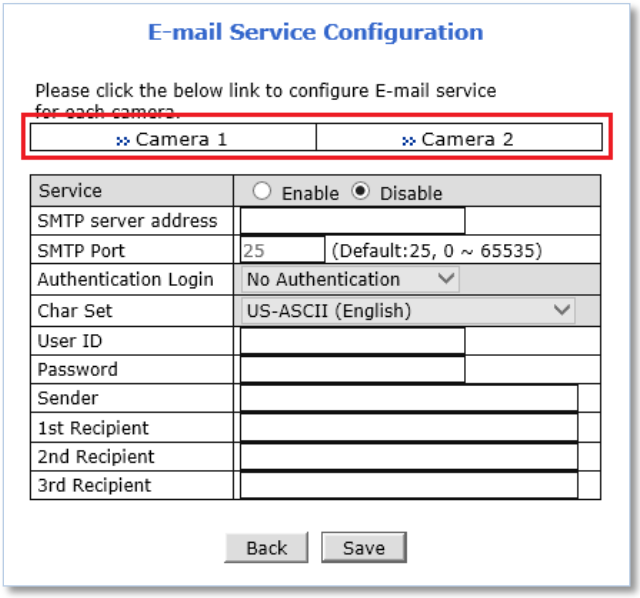
9.1.1 E-mail

FlexWATCH® devices can notify via email if an event occurs.

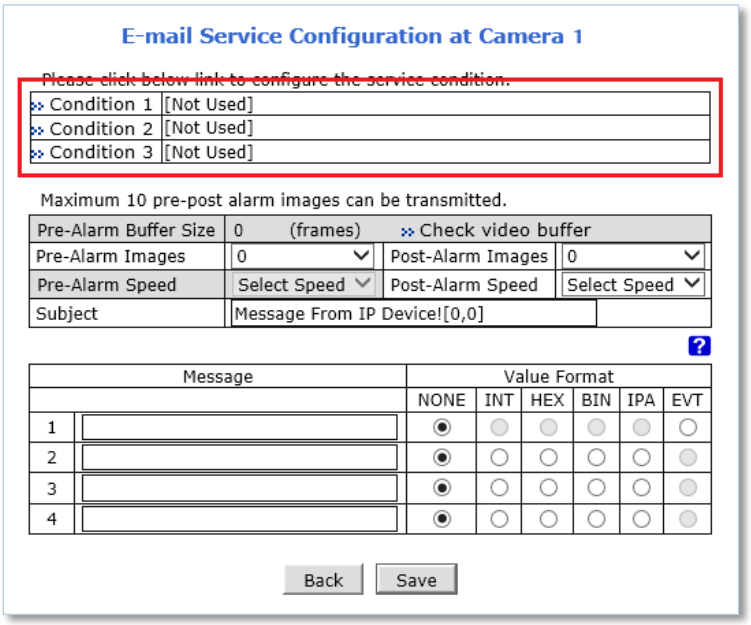


To use E-mail notification service, follow the steps below.

1) Click a **desired channel** for the email notification service.

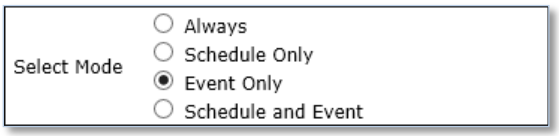


2) Click the first Not Used **Condition** (Multiple condition can be combined and used)



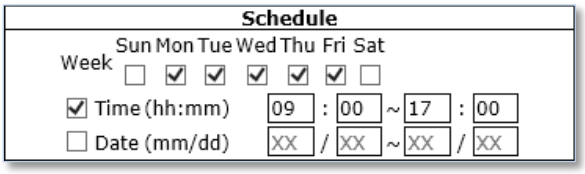
3) When the condition page appears, **Enable** the selected Condition

4) Select **Mode**

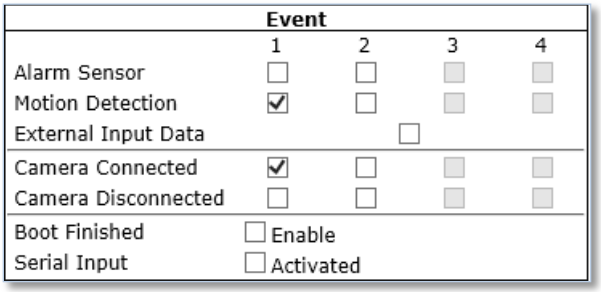


- Always: [Please do not use this mode for Email notification.]
- Schedule Only: [Please do not use this mode for Email notification.]
- Event Only: Send email when selected event occurred
- Schedule and Event: Send email when selected event occurs in specified time

5) Specify the **Recording Schedule** if necessary



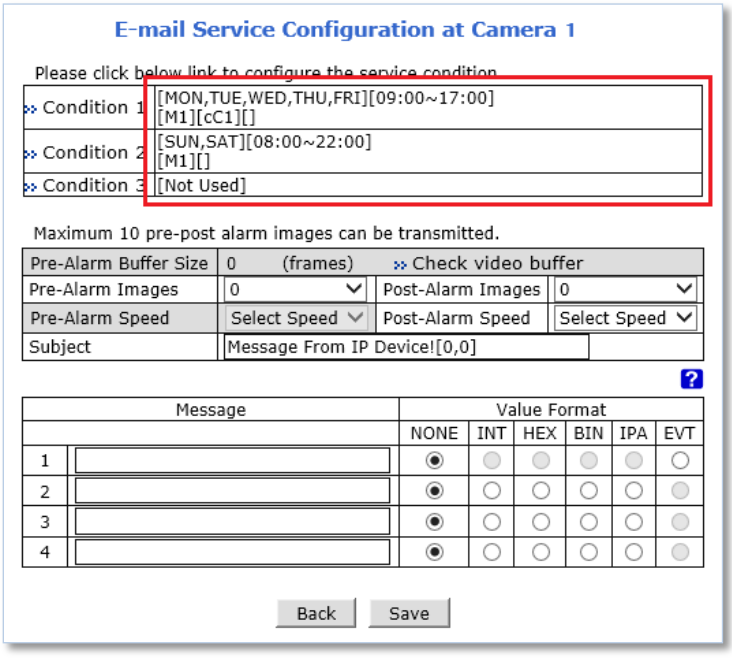
6) Select **Event Type**



- Event will be triggered by the followings:
  - Alarm Sensor (Alarm Input)
  - Motion Detection
  - External Input Data such as POS.
  - Camera Connection
    - Connected
    - Disconnected
  - Boot Finished
  - Serial Input

7) Click **Save**

8) When the following page appears, check the **condition summary** as marked in red below.



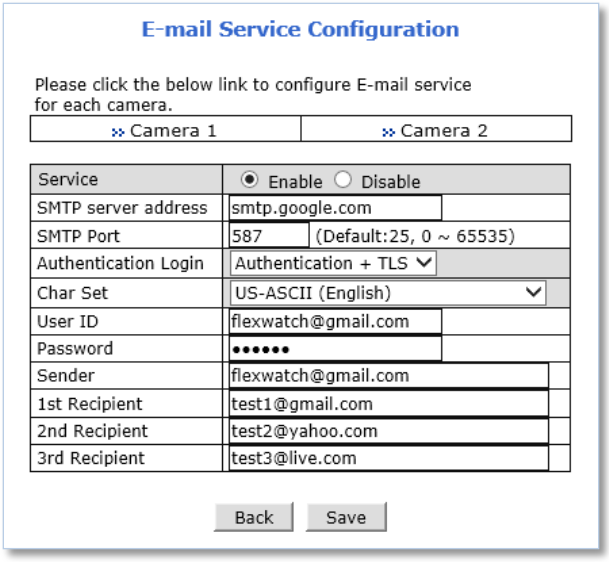
9) Select number of **image frames** for Pre and Post Alarm Images, and its **speed**.

10) Enter **subject** of the email.

11) Enter **Messages** (Contents of the email).

12) Click **Save**.

13) When the following page appears, enable the **E-mail Service**.



14) Enter **SMTP server** address.

15) Enter SMTP port that the SMTP server using.

16) Select **Authentication type** of the SMTP server.

17) Select **Character sets**.

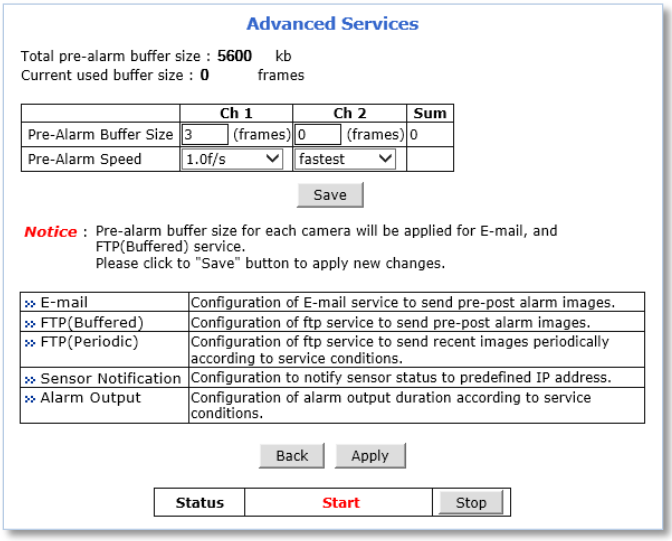
18) Enter **User ID** and **Password**.

19) Enter **Sender's email** address.

20) Enter **Recipients' email** addresses.

21) Click **Save**.

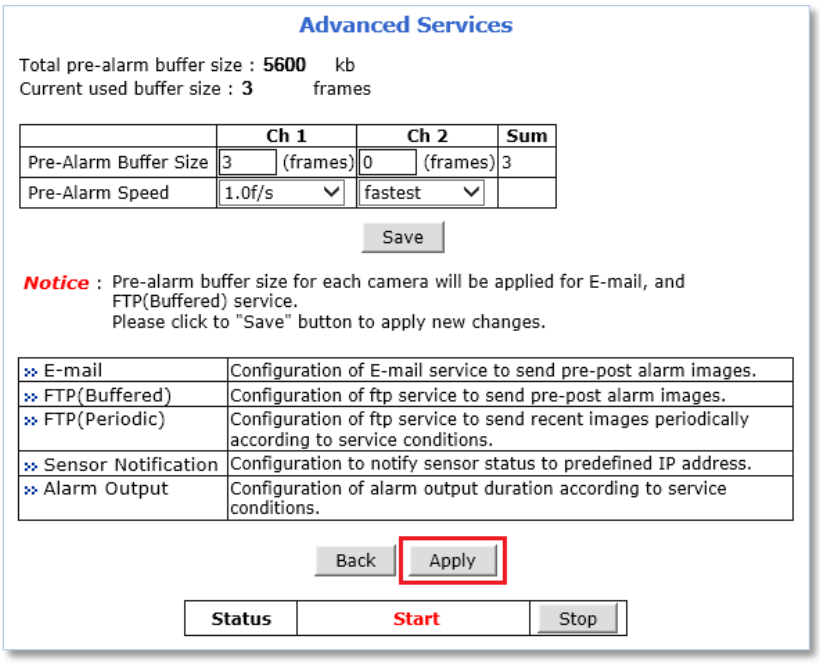
22) When the following page appears, enter Pre-Alarm Buffer **Frames**.



23) Select Pre-Alarm **Speed**.

24) Click **Save**.

25) Click **Apply** as shown below.

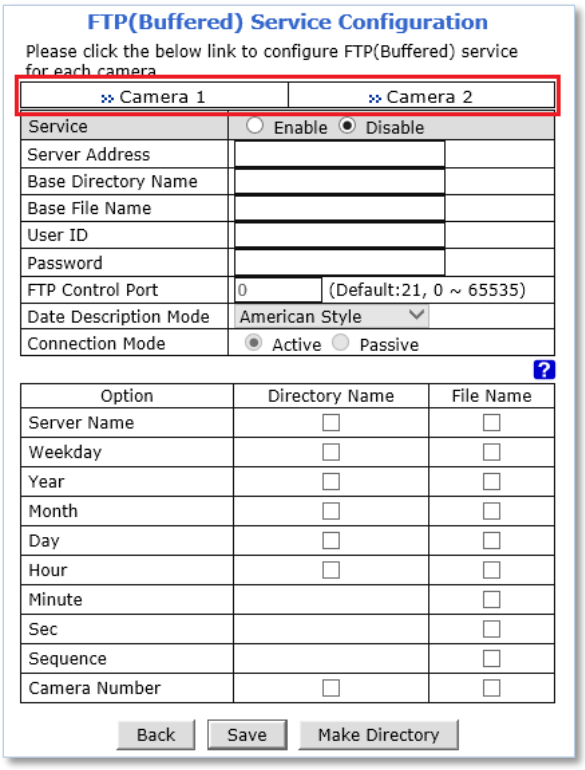


9.1.2 FTP (Buffered)

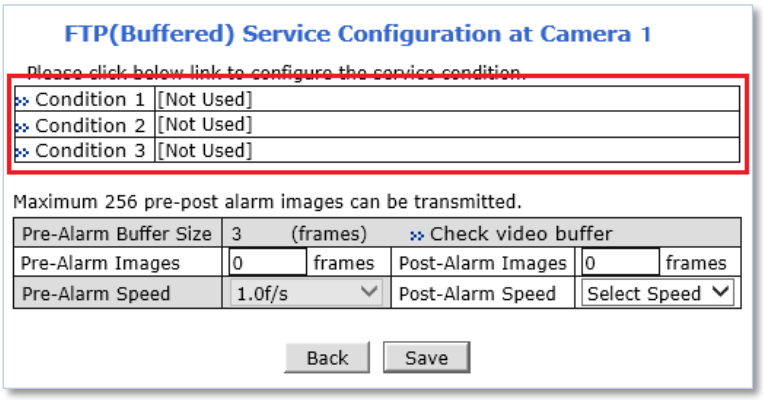
In Buffering Service, a series of images are continuously being stored in a buffer memory of the camera/server for a certain period of time. When the camera/server is triggered by an event or schedule, the images or alarm status just before and after the event/schedule are sent to FTP server.

To use FTP (Buffered) service, follow the steps below.

1) Click a **desired channel** for the FTP (Buffered) service.

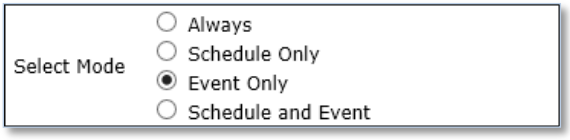


2) Click the first Not Used **Condition** (Multiple condition can be combined and used)



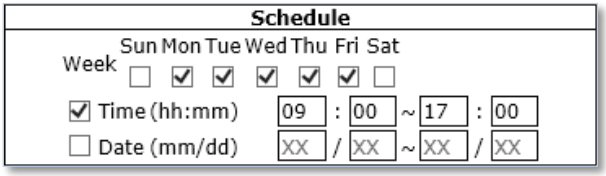
3) When the condition page appears, **Enable** the selected Condition

4) Select **Mode**

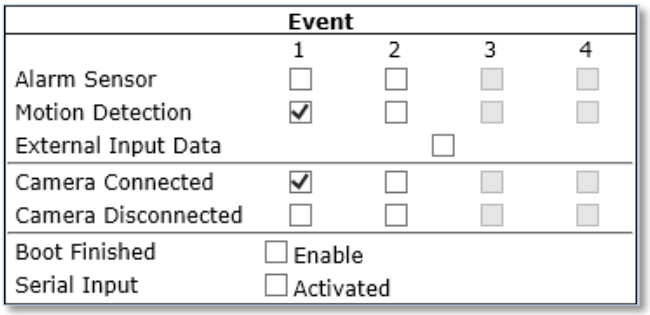


- Always: [Please do not use this mode for Email notification.]
- Schedule Only: [Please do not use this mode for Email notification.]
- Event Only: Send email when selected event occurred
- Schedule and Event: Send email when selected event occurs in specified time

5) Specify the **Recording Schedule** if necessary



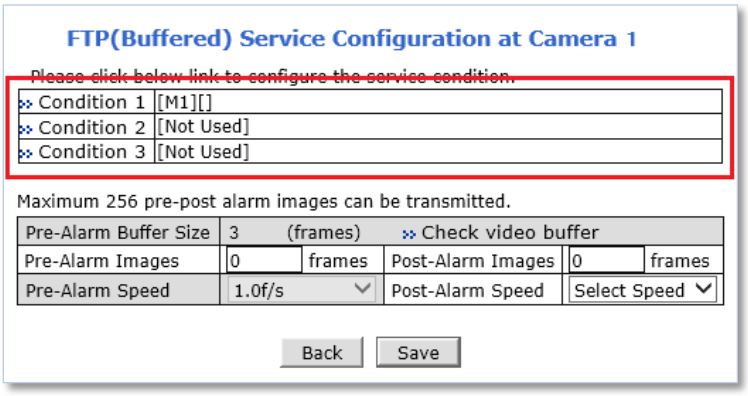
6) Select **Event Type**



- Event will be triggered by the followings:
  - Alarm Sensor (Alarm Input)
  - Motion Detection
  - External Input Data such as POS.
  - Camera Connection
    - Connected
    - Disconnected
  - Boot Finished
  - Serial Input

7) Click **Save**

8) When the following page appears, check the **condition summary** as marked in red below.



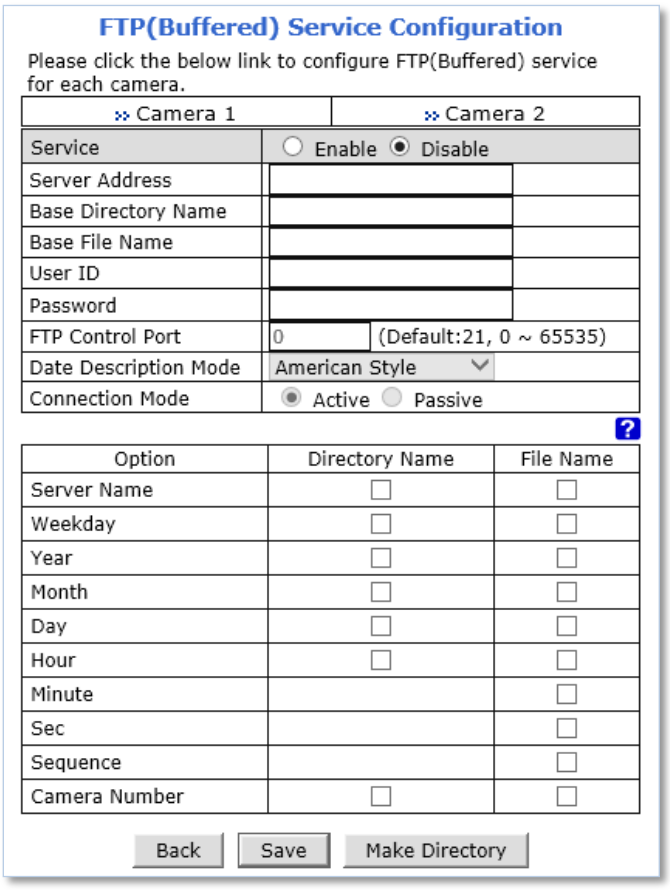
9) Enter the number of **Pre-Alarm Image** frames.

(The number of Pre-alarm images must be equal or less than Pre-Alarm Buffer Size.)

10) Enter the number of **Post-Alarm Image** frames and select **Post-Alarm Speed**, if necessary.

11) Click **Save**.

12) When the following page appears, Enable the FTP(Buffered) service.



13) Enter **FTP server address**.

14) Enter **Base Directory Name**. (The directory in FTP server where the data will be uploaded)

15) Enter **Base File Name**.

16) Enter **FTP Control Port** number.

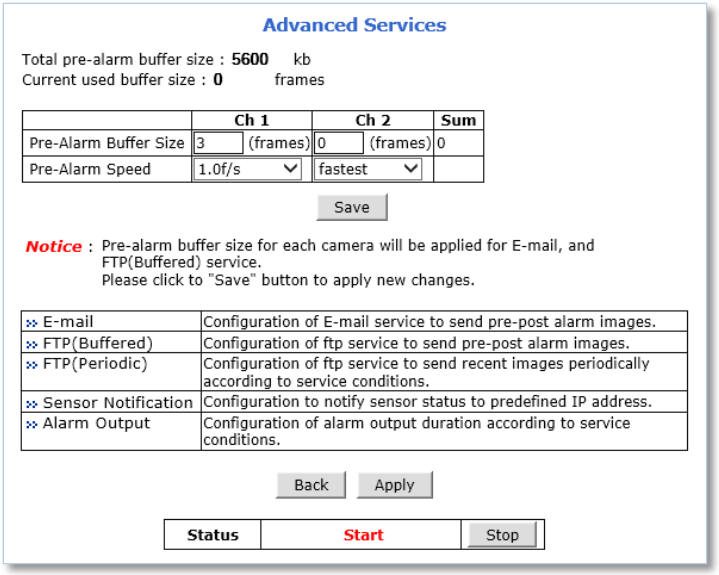
17) Select Data **Description Mode** for FTP server.

18) Select **Connection mode** for FTP server.

19) Select **name configurations** of directory and files.

20) Click **Make Directory**.

21) When the following page appears, Click **Apply**.

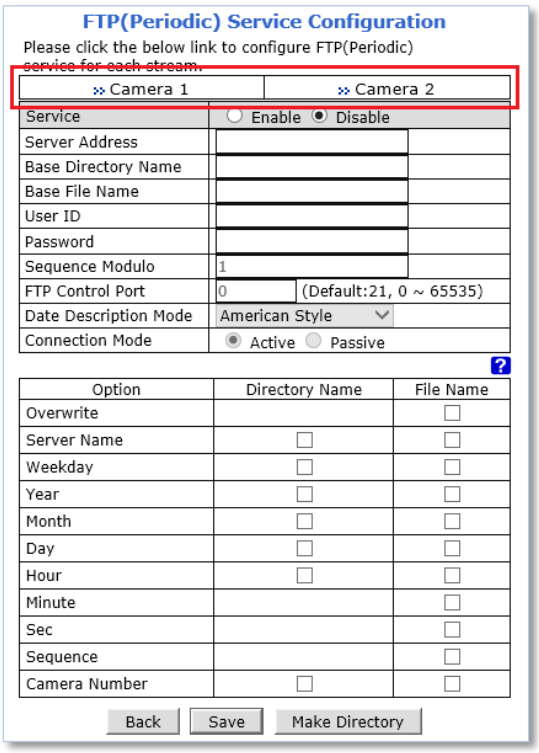


9.1.3 FTP (Periodic)

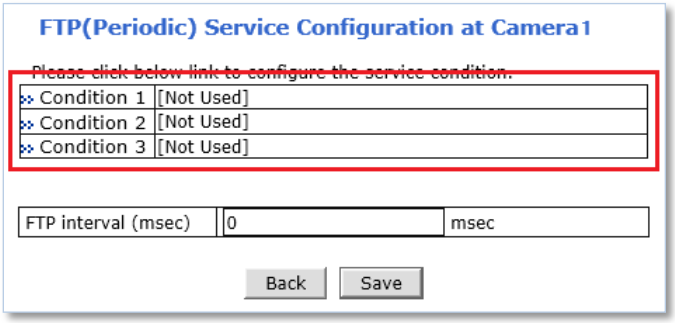
In Periodic Service, only the image, alarm/sensor status after an event/schedule is reported to you upon the server being triggered.

To use FTP (Periodic) service, follow the steps below.

1) Click a **desired channel** for the FTP (Periodic) service.

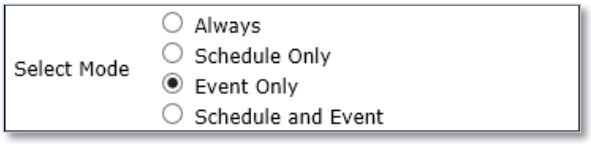


2) Click the first Not Used **Condition** (Multiple condition can be combined and used)



3) When the condition page appears, **Enable** the selected Condition

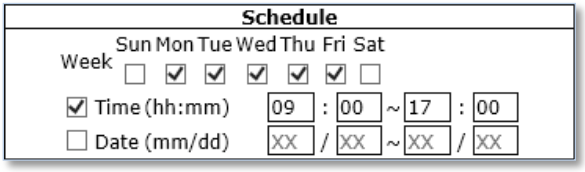
4) Select **Mode**



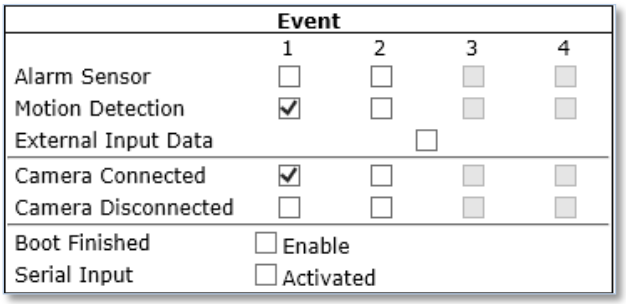
- Always: [Please do not use this mode for Email notification.]

- Schedule Only: [Please do not use this mode for Email notification.]
- Event Only: Send email when selected event occurred
- Schedule and Event: Send email when selected event occurs in specified time

5) Specify the **Recording Schedule** if necessary



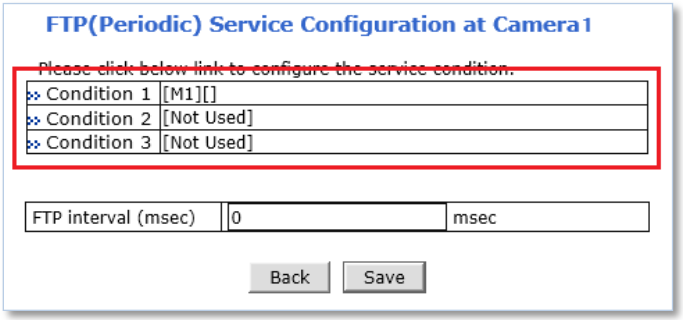
6) Select **Event Type**



- Event will be triggered by the followings:
  - Alarm Sensor (Alarm Input)
  - Motion Detection
  - External Input Data such as POS.
  - Camera Connection
    - Connected
    - Disconnected
  - Boot Finished
  - Serial Input

7) Click **Save**

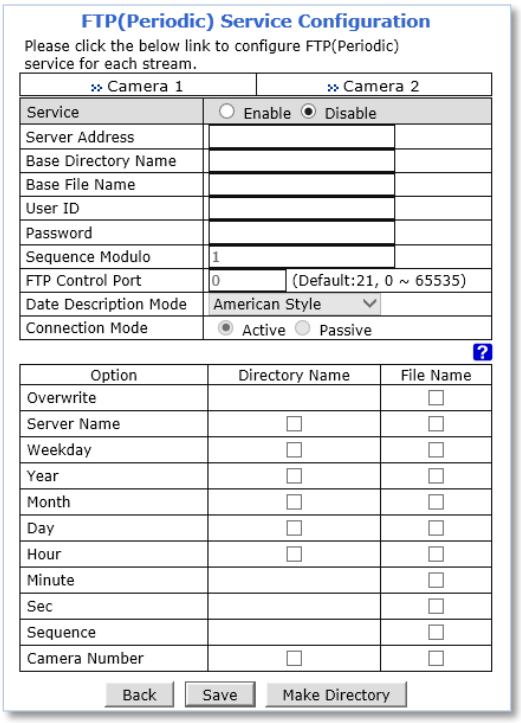
8) When the following page appears, check the **condition summary** as marked in red below.



9) Enter FTP **upload interval** (millisecond).

10) Click **Save**.

11) When the following page appears, **Enable** the FTP (Periodic) service.



12) Enter **FTP server address**.

13) Enter **Base Directory Name**. (The directory in FTP server where the data will be uploaded)

14) Enter **Base File Name**.

15) Enter **FTP Control Port** number.

16) Select Data **Description Mode** for FTP server.

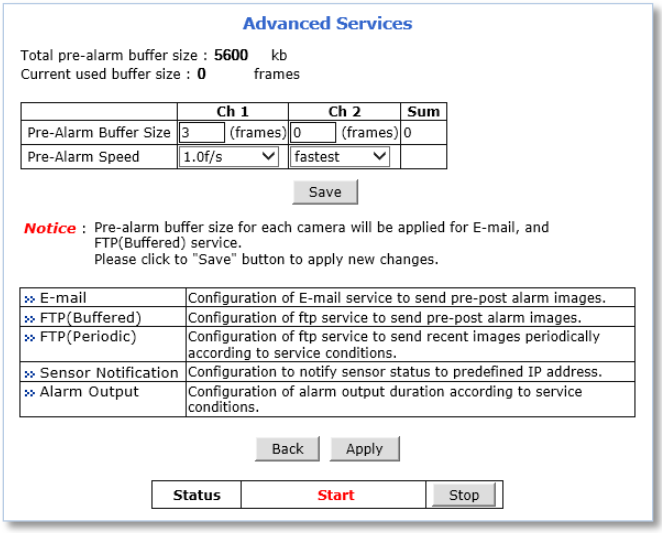
17) Select **Connection mode** for FTP server.

18) Select **name configurations** of directory and files.

19) Click **Make Directory** to create the directory in the FTP server.

20) Click **Save**.

21) When the following page appears, Click **Apply**.

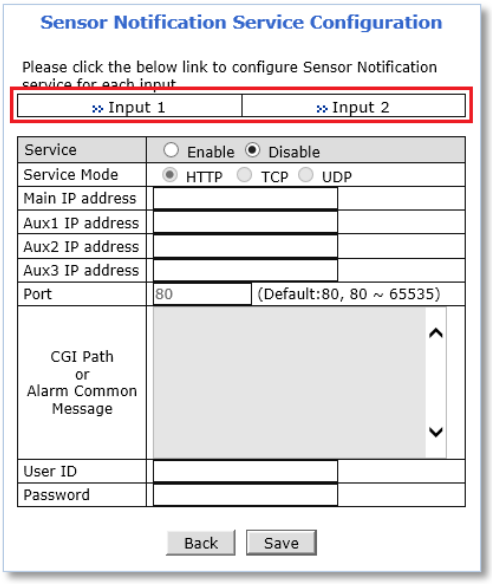


9.1.4 Sensor Notification

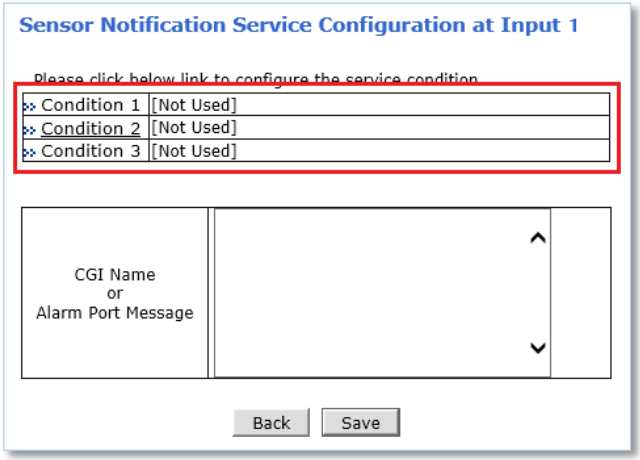
When event occurs, the CGI or Alarm messages can be sent to a specific IP.

To use Sensor Notification, follow the steps below.

1) Click a **desired input number** for the Sensor notification service.



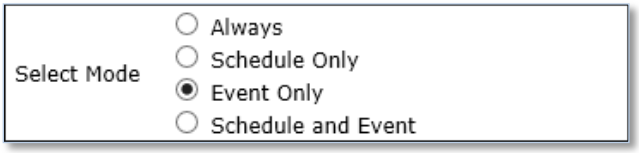
2) Click the first Not Used **Condition** (Multiple condition can be combined and used)



0

3) When the condition page appears, **Enable** the selected Condition

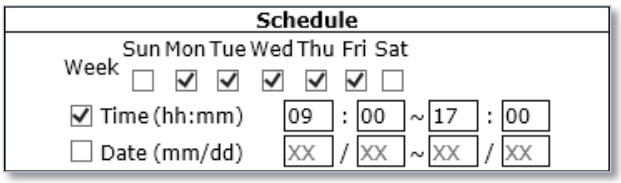
4) Select **Mode**



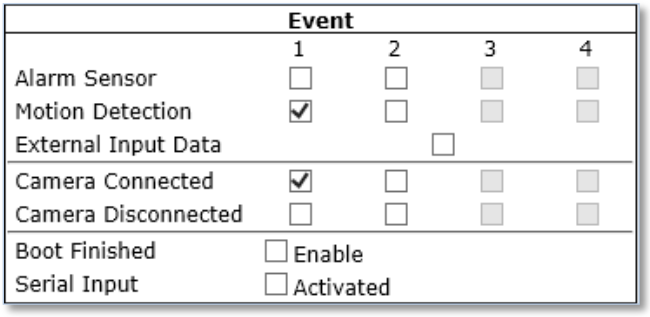
- Always: [Please do not use this mode for Email notification.]
- Schedule Only: [Please do not use this mode for Email notification.]
- Event Only: Send email when selected event occurred

- Schedule and Event: Send email when selected event occurs in specified time

5) Specify the **Recording Schedule** if necessary



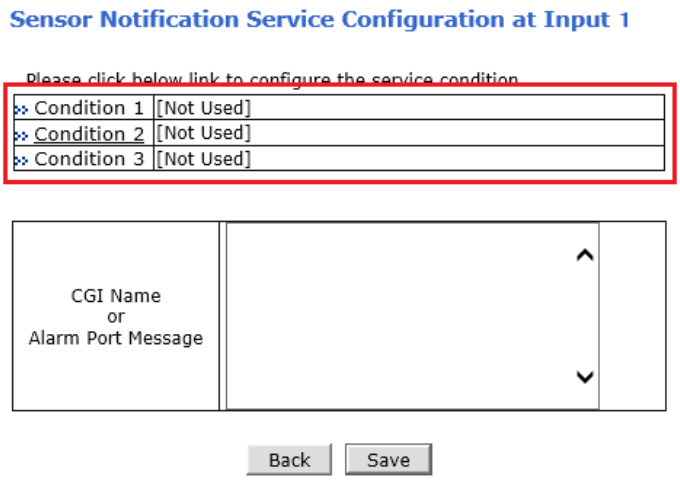
6) Select **Event Type**



- Event will be triggered by the followings:
  - Alarm Sensor (Alarm Input)
  - Motion Detection
  - External Input Data such as POS.
  - Camera Connection
    - Connected
    - Disconnected
  - Boot Finished
  - Serial Input

7) Click **Save**

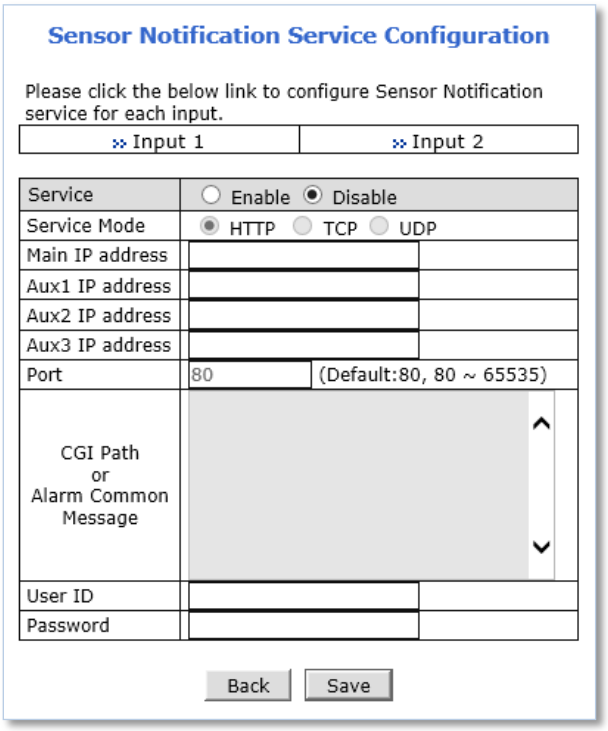
8) When the following page appears, check the **condition summary** as marked in red below.



9) Enter **CGI Name** or **Alarm Port Message**.

10) Click **Save**.

11) When the following page appears, **Enable** the Sensor Notification service.



12) Select **Service mode** or Protocol type.

13) Enter **IP addresses** for the devices that will receive CGI or Alarm Message.

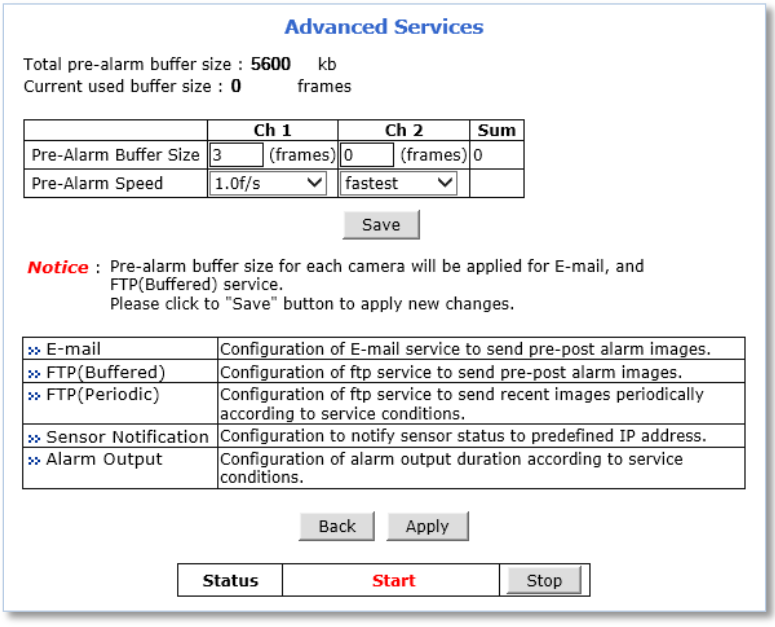
14) Enter **Port** number.

15) Enter **CGI path** or **Alarm Common Message**.

16) Enter **User ID** and **Password** if necessary.

17) Click **Save**.

18) When the following page appears, Click **Apply**.

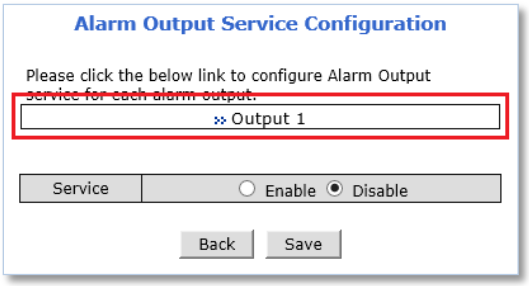


9.1.5 Alarm Output

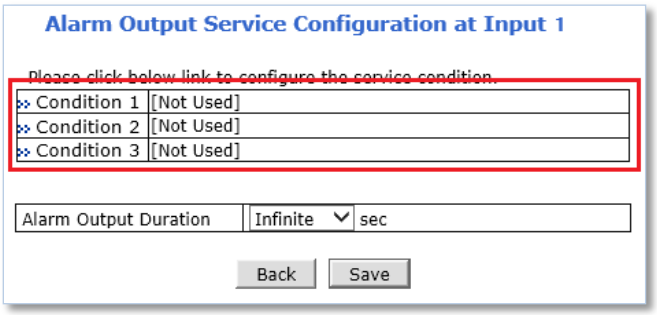
When event occurs; the FlexWATCH™ device can be triggered external alarm.

To use Alarm Output, follow the steps below.

1) Click a **desired Output number** for the Alarm out service.

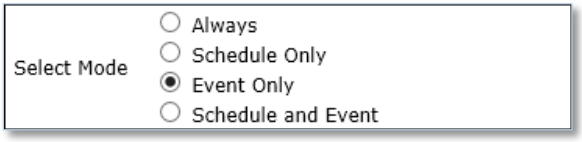


2) Click the first Not Used **Condition** (Multiple condition can be combined and used)



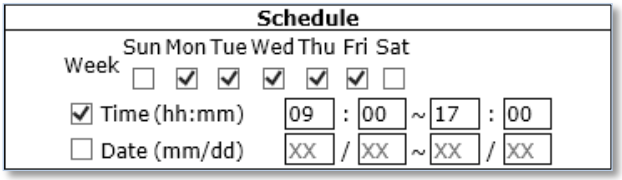
3) When the condition page appears, **Enable** the selected Condition

4) Select **Mode**

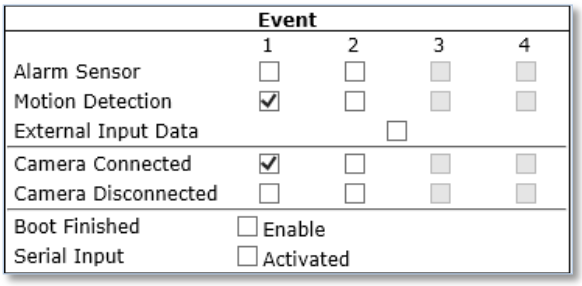


- Always: [Please do not use this mode for Email notification.]
- Schedule Only: [Please do not use this mode for Email notification.]
- Event Only: Send email when selected event occurred
- Schedule and Event: Send email when selected event occurs in specified time

5) Specify the **Recording Schedule** if necessary



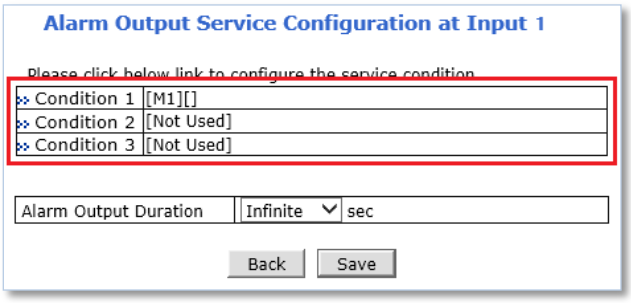
6) Select **Event Type**



- Event will be triggered by the followings:
  - Alarm Sensor (Alarm Input)
  - Motion Detection
  - External Input Data such as POS.
  - Camera Connection
    - Connected
    - Disconnected
  - Boot Finished
  - Serial Input

7) Click **Save**

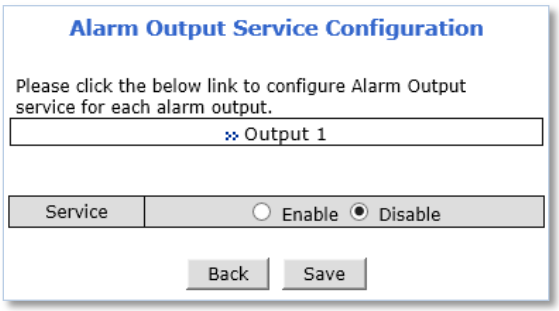
8) When the following page appears, check the **condition summary** as marked in red below.



9) Select **Alarm Output Duration** time.

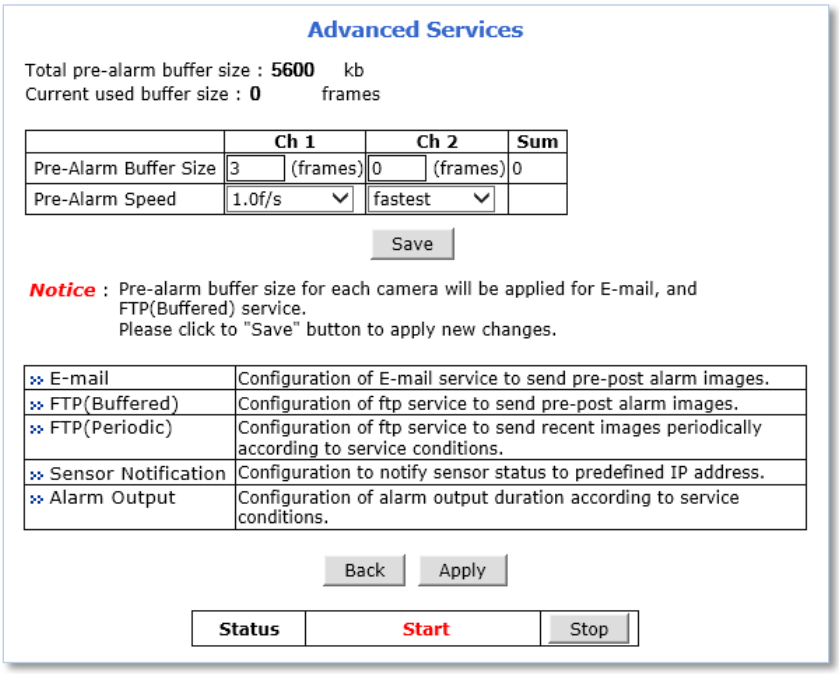
10) Click **Save**.

11) When the following page appears, **Enable** the Alarm Output service.



12) Click **Save**.

13) When the following page appears, Click **Apply**.

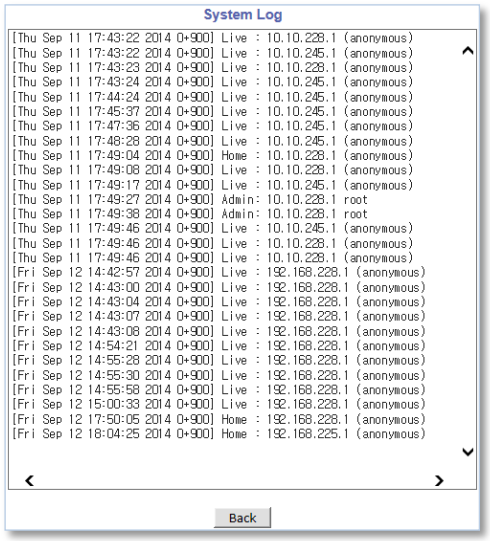


10. Utilities

System management tools are contained in this menu.

10.1 Log

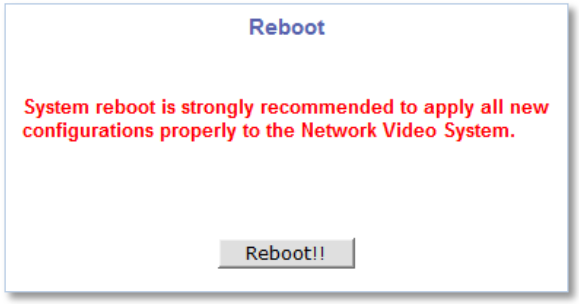
System log file provides you the information about when and who access' the contents of FlexWATCH® device such as HTTP file or CGI programs. In each line, log data consists of date, time, category, IP address, user ID as shown below.



10.2 Reboot

It is recommended to reboot the system after making changes to the configuration.

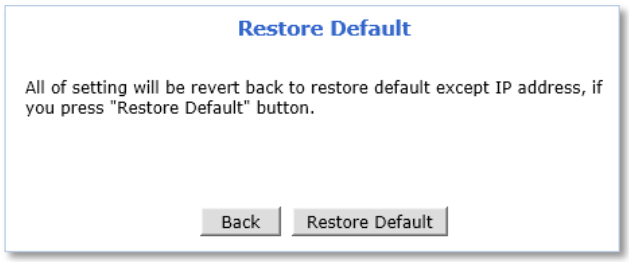
To reboot, click **Reboot** as shown below.



10.3 Restore Default

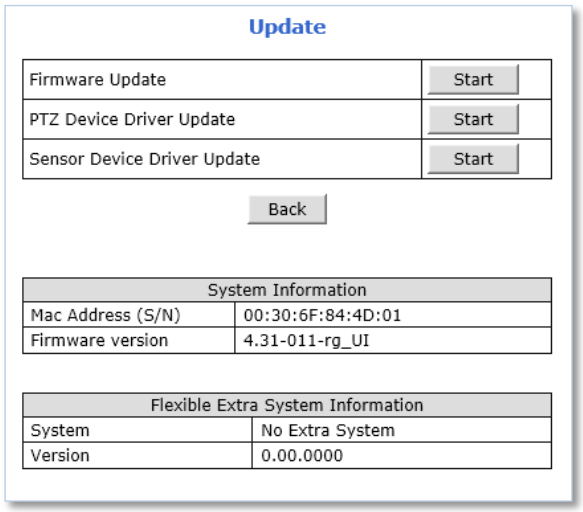
Initialize the setting values of the unit to the factory default values except Network Configuration values.

To Restore Default, click **Restore Default** as shown below and follow the instructions on the screen



10.4 System Update

FlexWATCH® device firmware and drivers for external devices can be updated in this menu.



- **Firmware Update**: Update FlexWATCH™ device firmware.
- **PTZ Device Driver Update**: Update or add a PTZ driver.
- **Sensor Device Driver Update**: Update or add a Sensor device driver.
- **Flexible Extra System (FES)**: Update FES driver files.

To system update, click the **Start button** of desired update item and follow the instructions on the screen.

Note: Firmware update can be done with FlexWATCH® IP Installer software.

Note: If Web browser's pop-up blocker is turned on, update window may not appear.
In this case, disable the pop-up blocker and then proceed to upgrade the system.

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